

FIG. 1
PRIOR ART

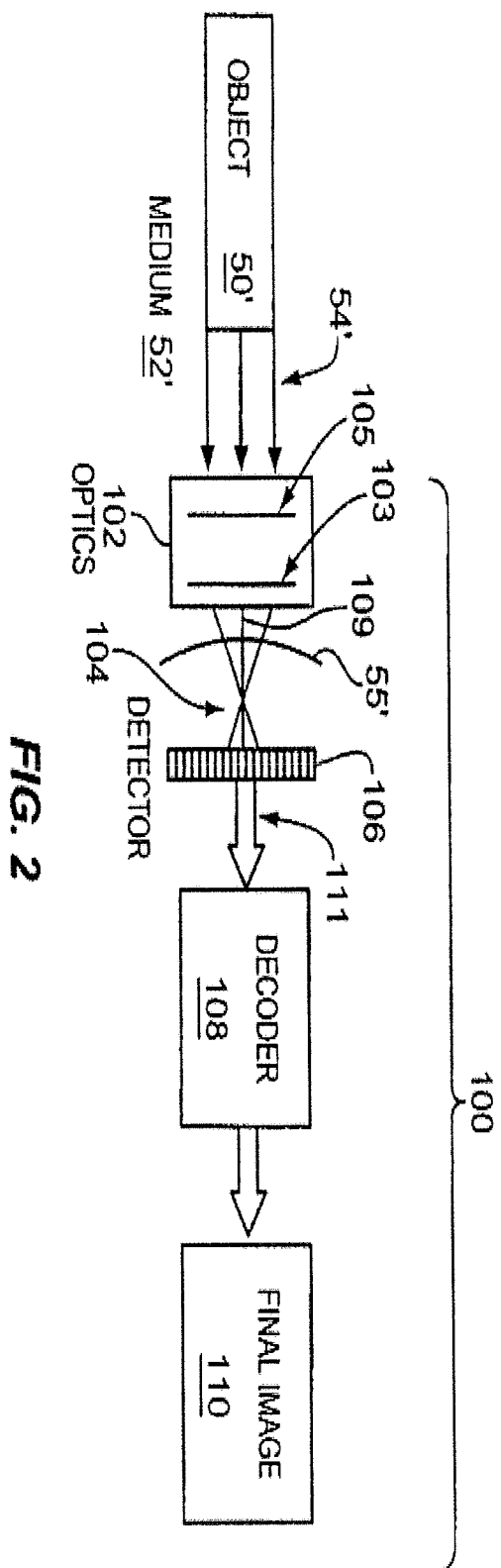


FIG. 2

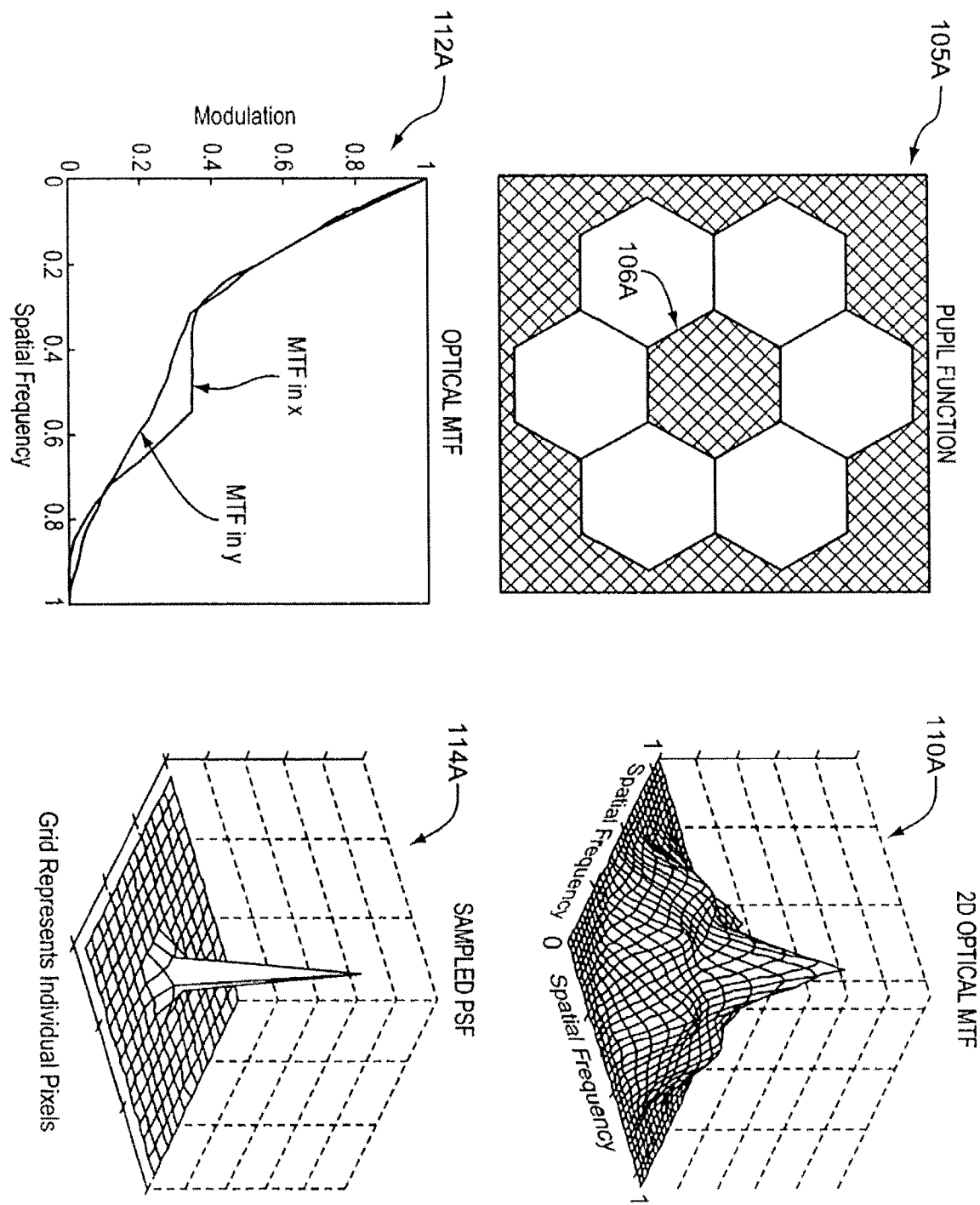


FIG. 3

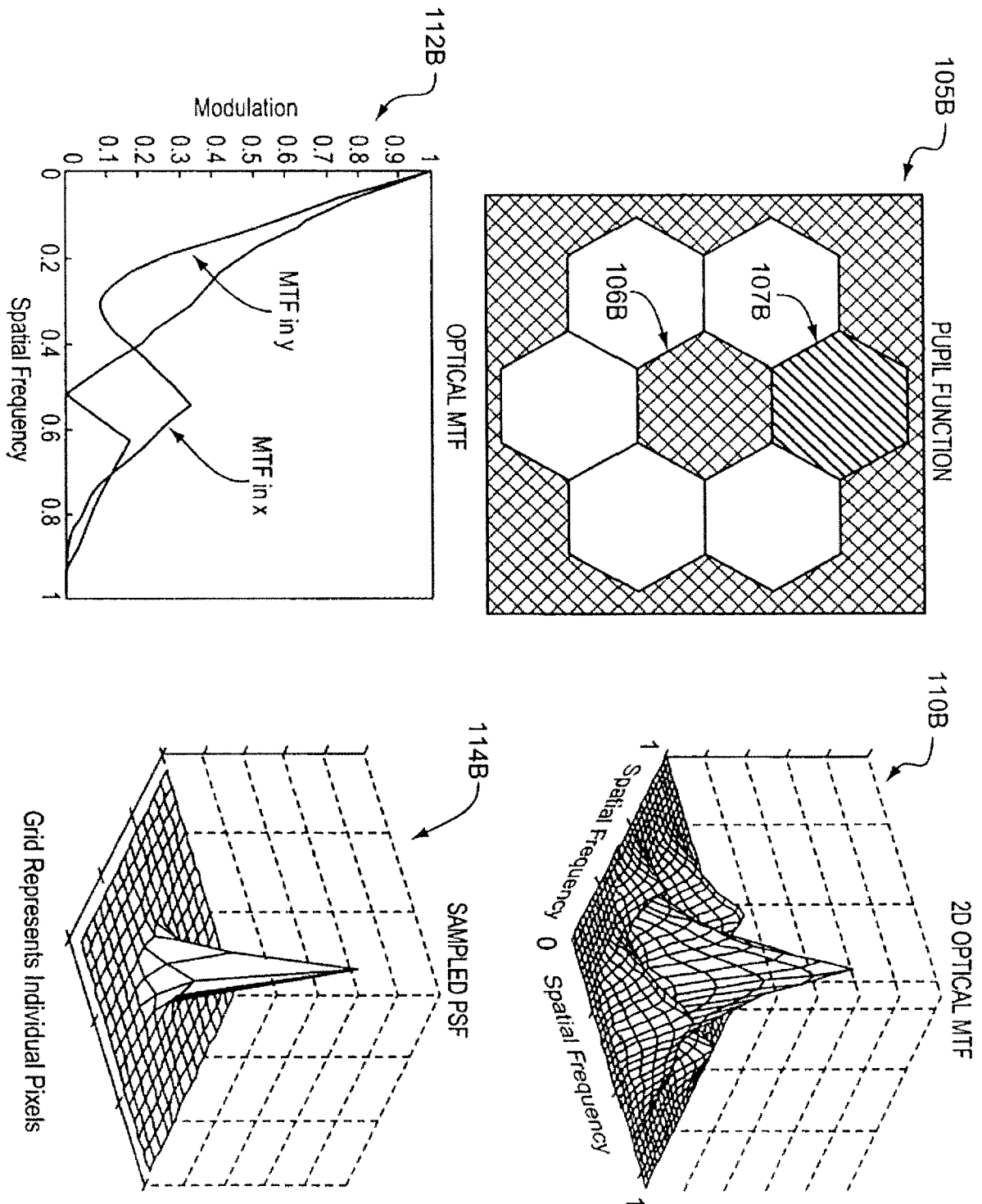


FIG. 4

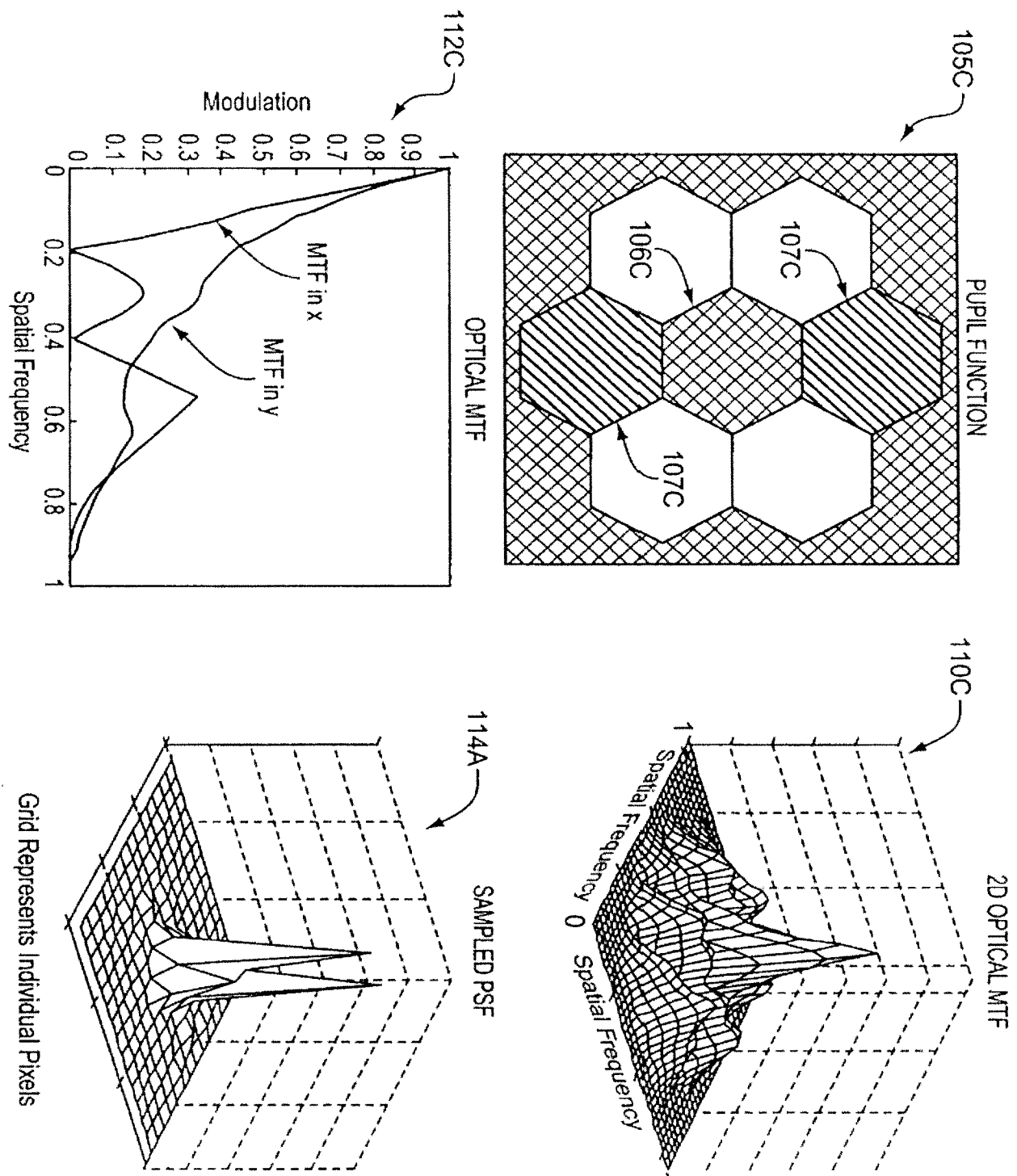


FIG. 5

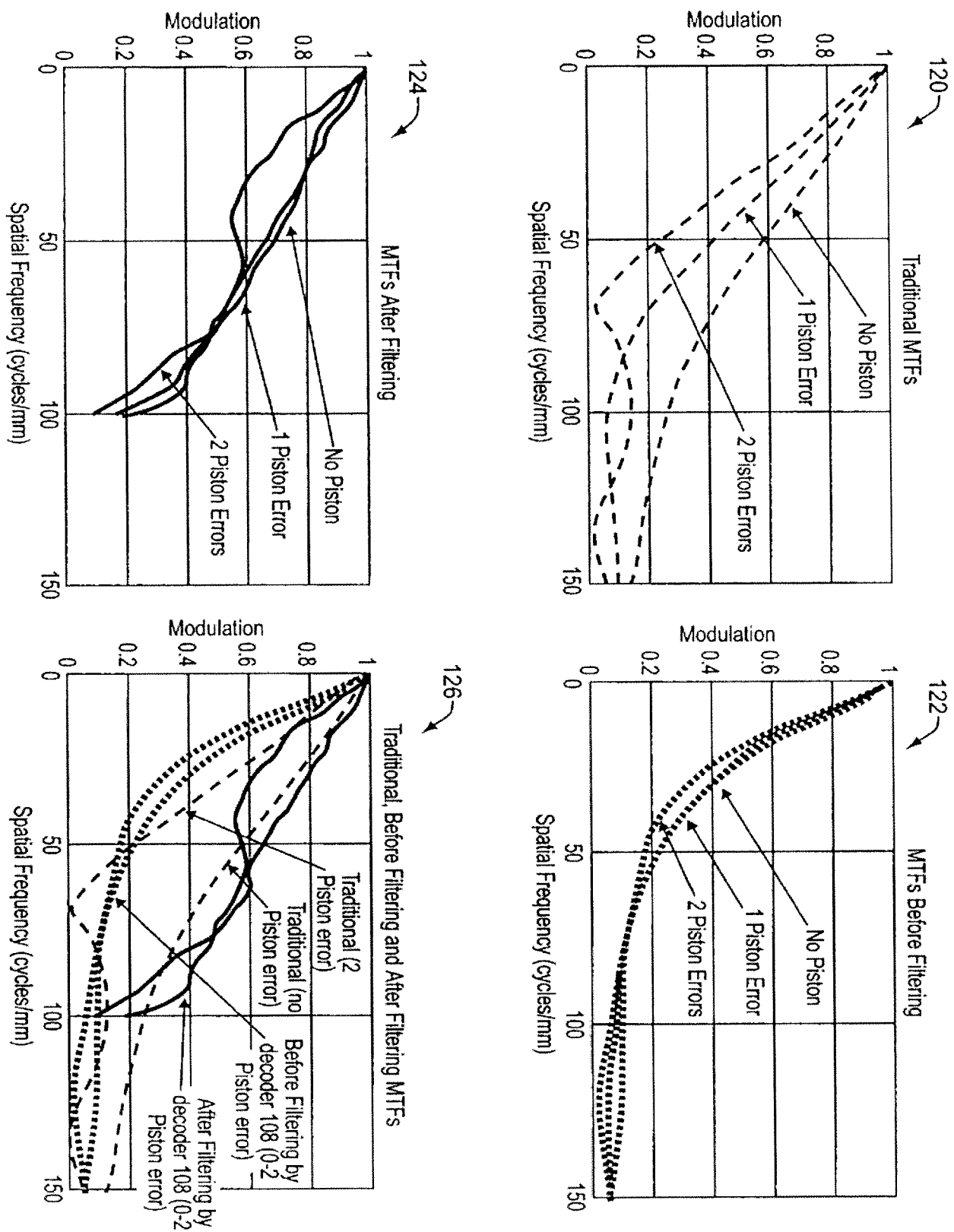


FIG. 6

TRADITIONAL IMAGING

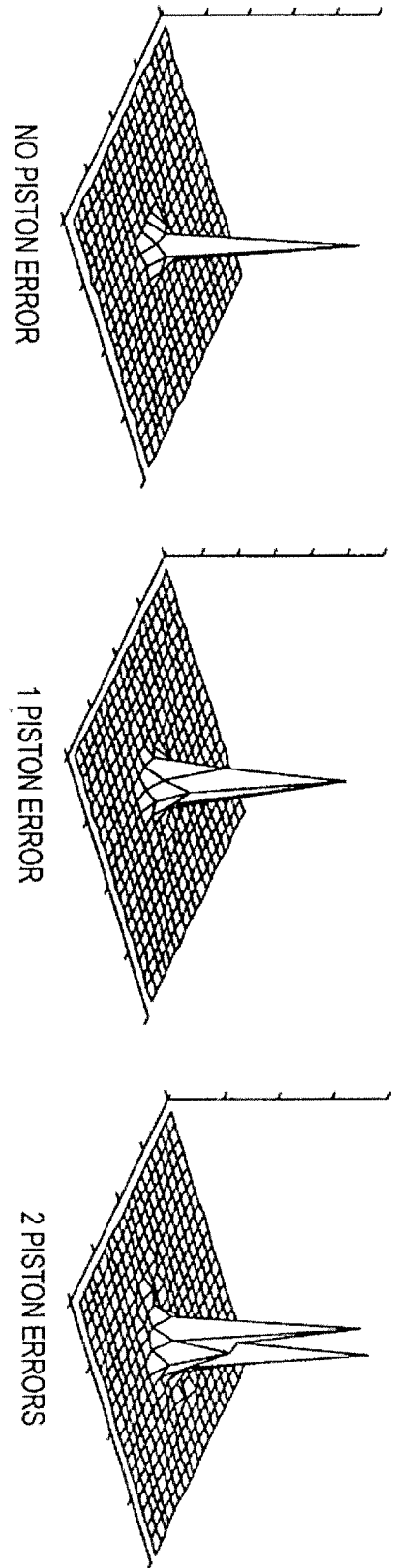


FIG. 7A

AFTER FILTERING

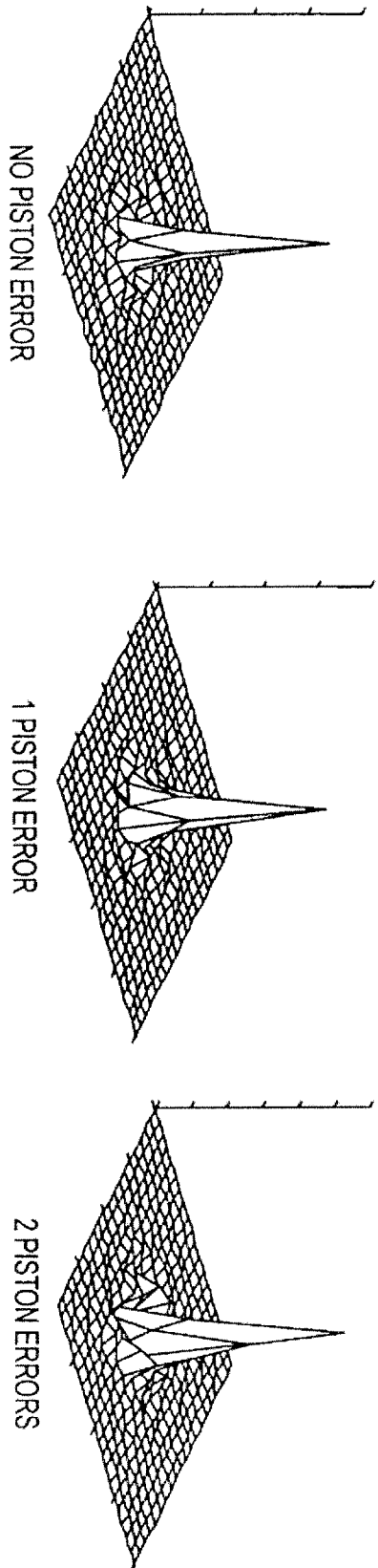


FIG. 7B

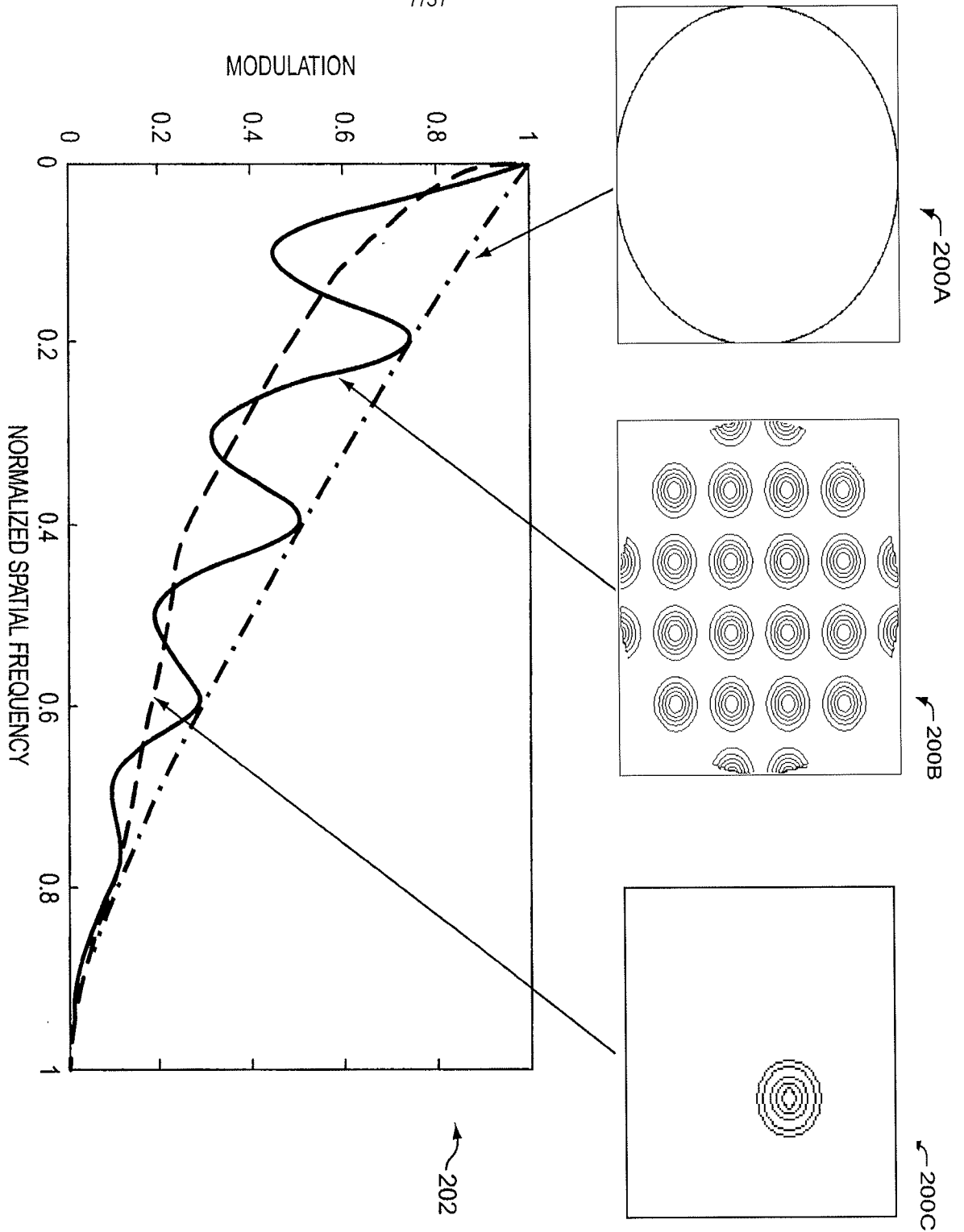


FIG. 8

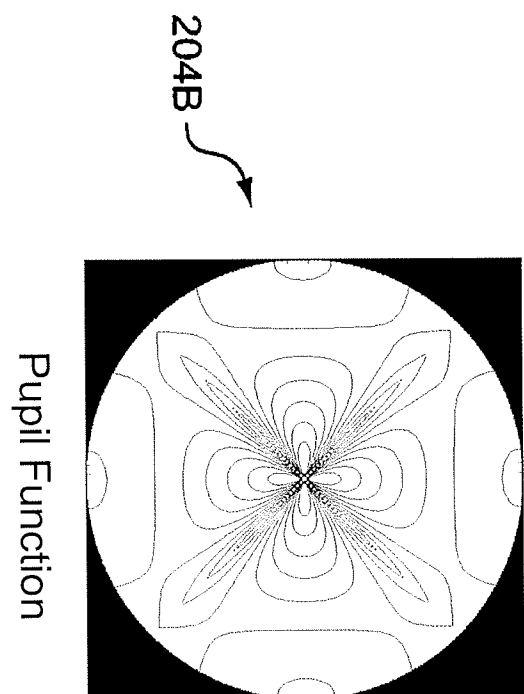
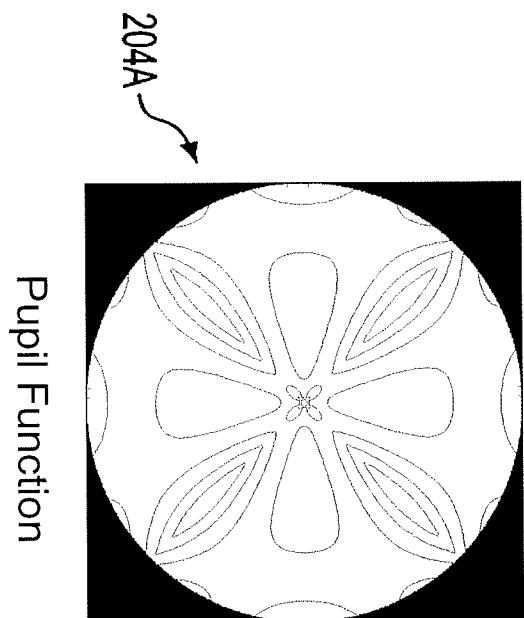
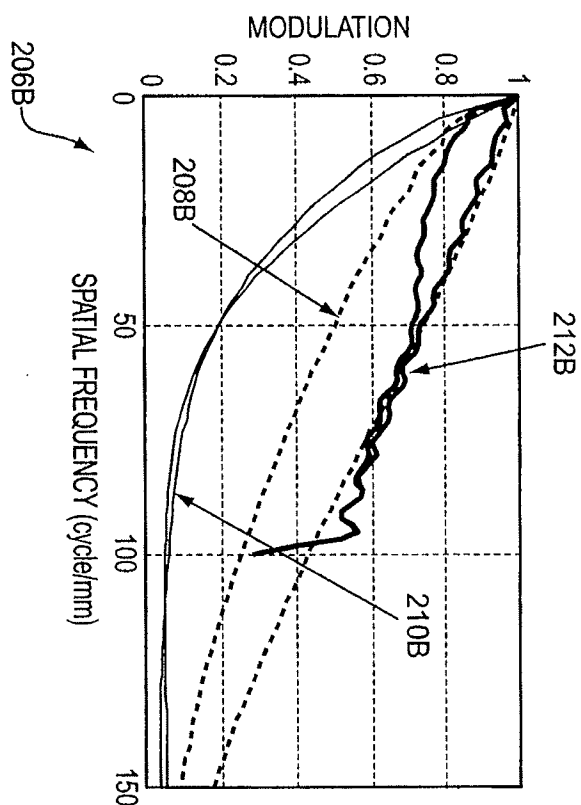
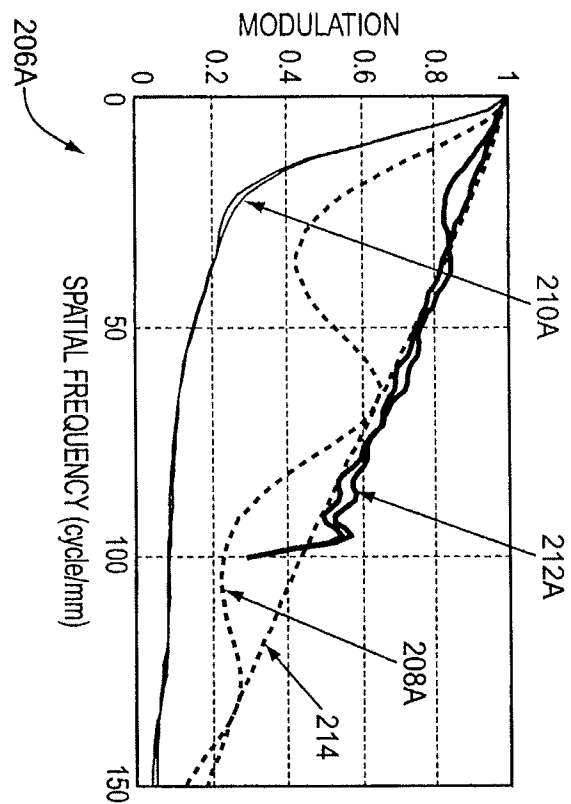
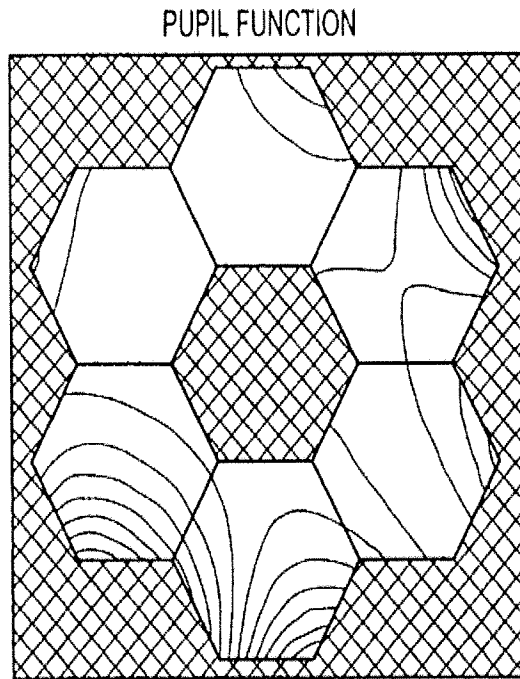


FIG. 9

FIG. 10**FIRST ORDER OPTICAL PARAMETERS**

2-meter collecting aperture

12-meter focal length

5- μm pixel size

100% fill factor

0.5 μm wavelength

Phase function is a Zernike polynomial with the following weights

#	Mathematical Form	Weight	#	Mathematical Form	Weight
0	1	0	11	$(4\rho^2 - 3)\rho^2 \cos 2\theta$	0.0379
1	$\rho \cos \theta$	0	12	$(4\rho^2 - 3)\rho^2 \sin 2\theta$	-0.1151
2	$\rho \sin \theta$	0	13	$\rho^4 \cos 4\theta$	0.5730
3	$2\rho^2 - 1$	-0.1914	14	$\rho^4 \sin 4\theta$	0.2412
4	$\rho^2 \cos 2\theta$	-0.3986	15	$(4\rho^4 - 12\rho^2 + 3)\rho \cos \theta$	-0.3050
5	$\rho^2 \sin 2\theta$	0.0290	16	$(4\rho^4 - 12\rho^2 + 3)\rho \sin \theta$	-0.1698
6	$(3\rho^2 - 2)\rho \cos \theta$	0.1073	17	$(5\rho^5 - 4\rho^3)\cos 3\theta$	0.0589
7	$(3\rho^2 - 2)\rho \sin \theta$	-0.0336	18	$(5\rho^5 - 4\rho^3)\sin 3\theta$	-0.0965
8	$\rho^3 \cos 3\theta$	0.0496	19	$\rho^5 \cos 5\theta$	0.7186
9	$\rho^3 \sin 3\theta$	-0.0562	20	$\rho^5 \sin 5\theta$	-0.5219
10	$6\rho^4 - 6\rho^2 + 1$	-0.2093			

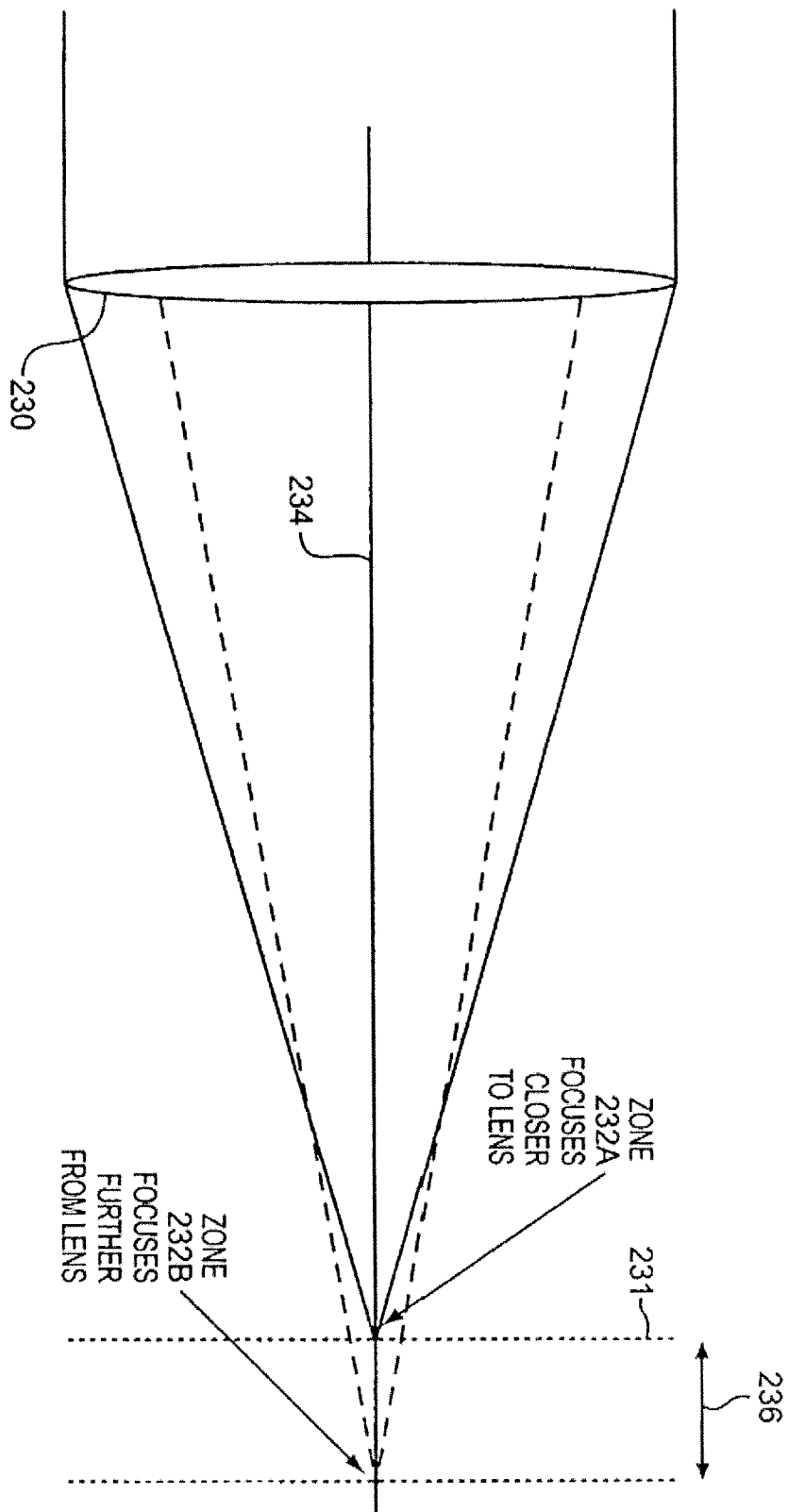


FIG. 11

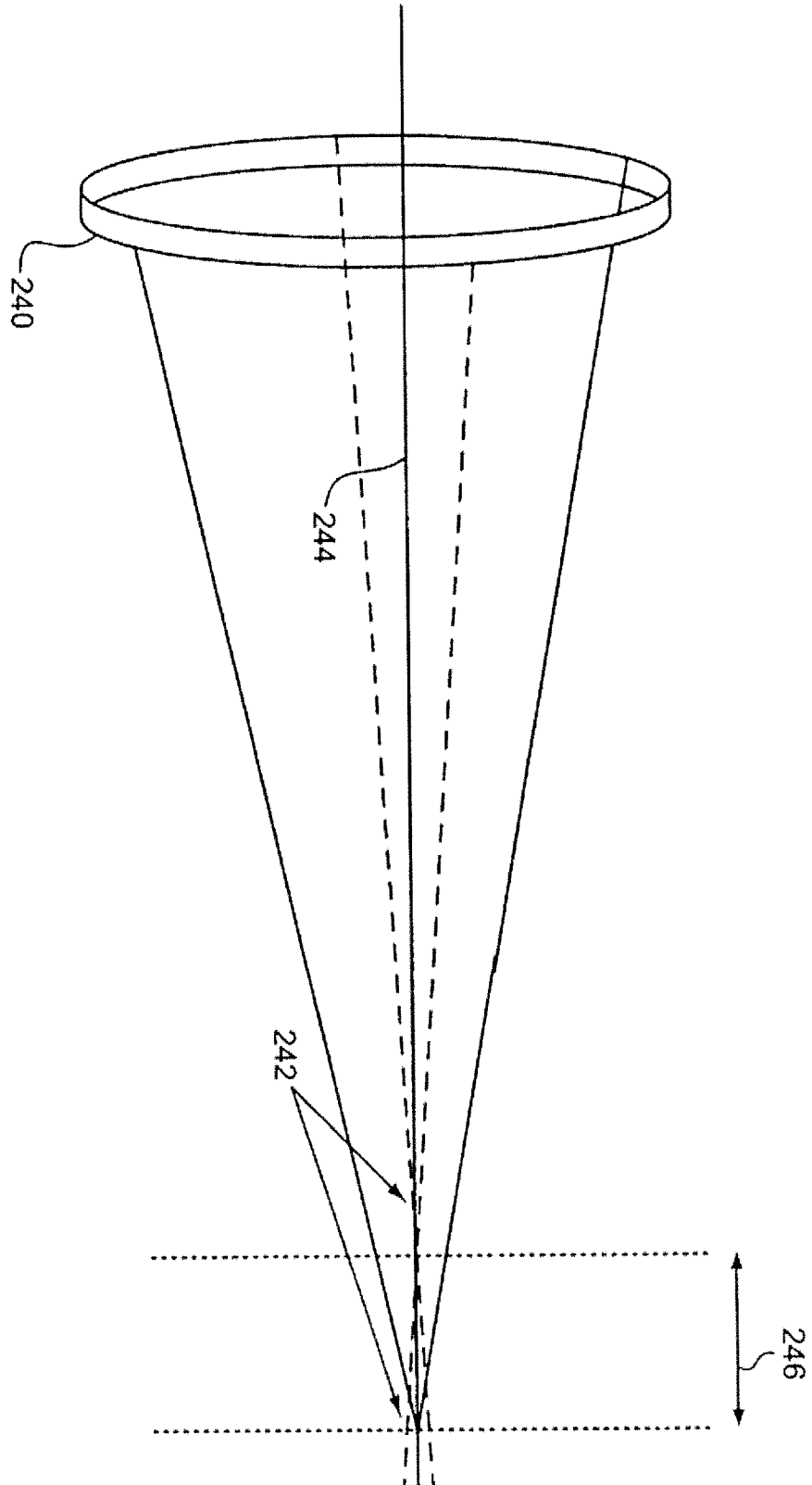


FIG. 12

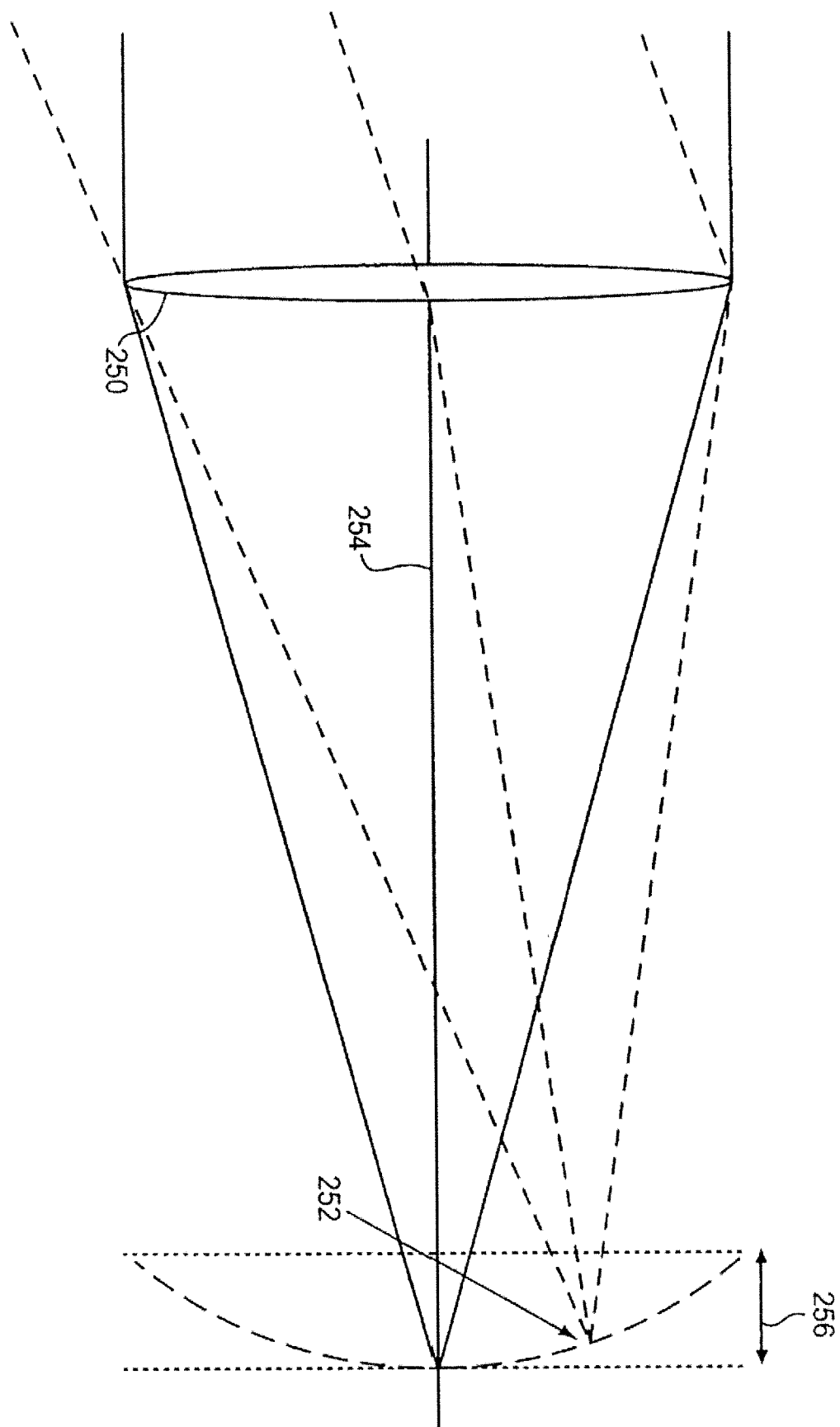


FIG. 13

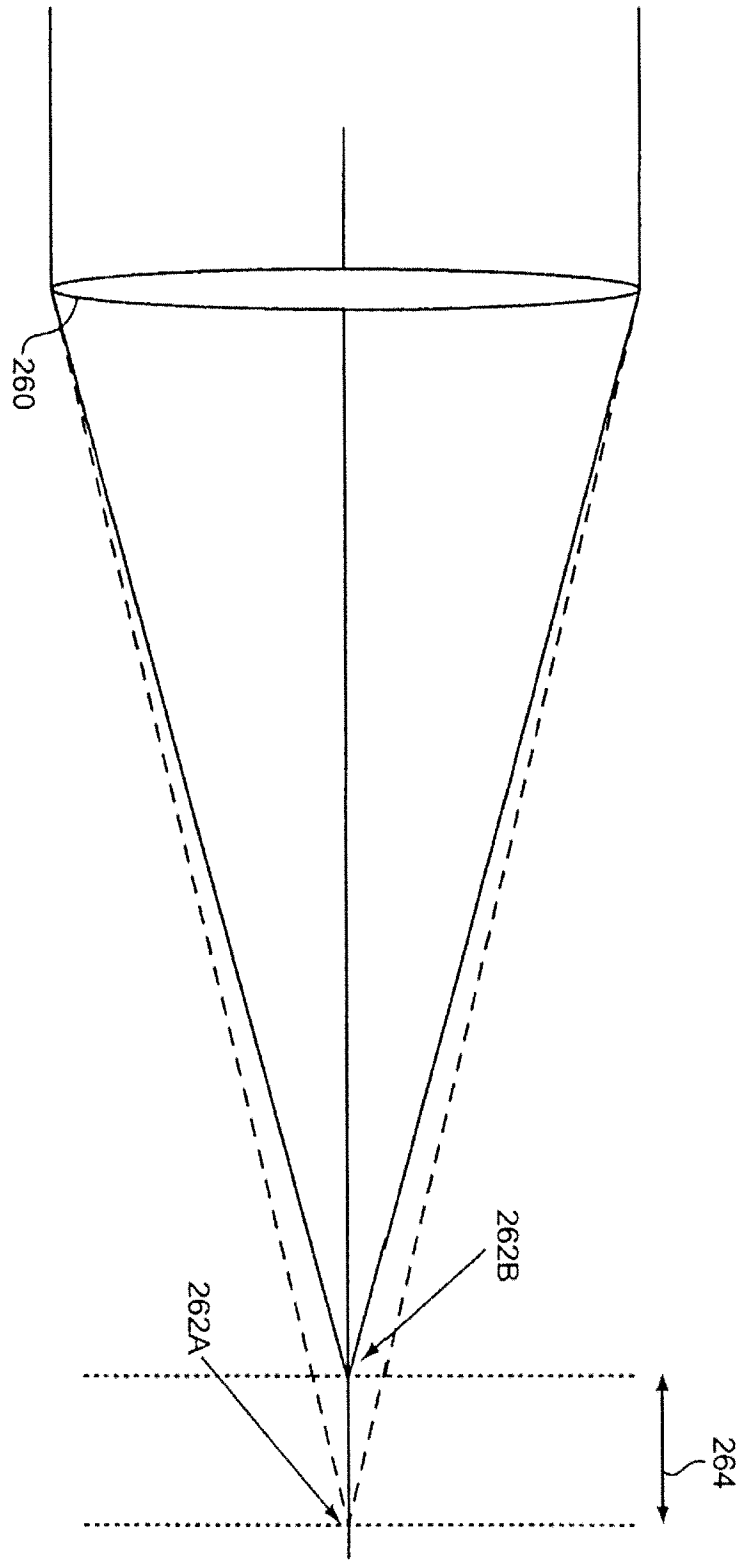
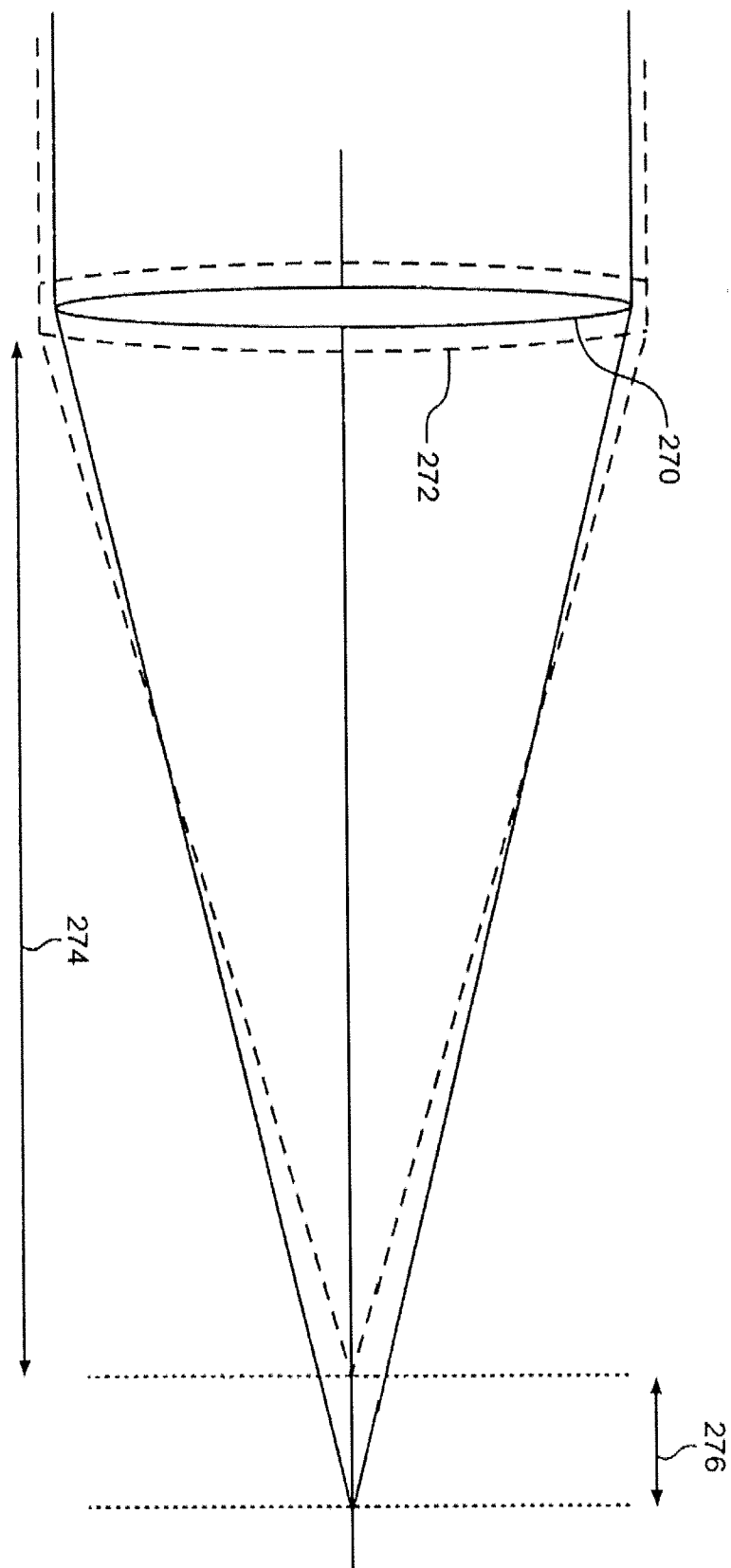


FIG. 14

FIG. 15



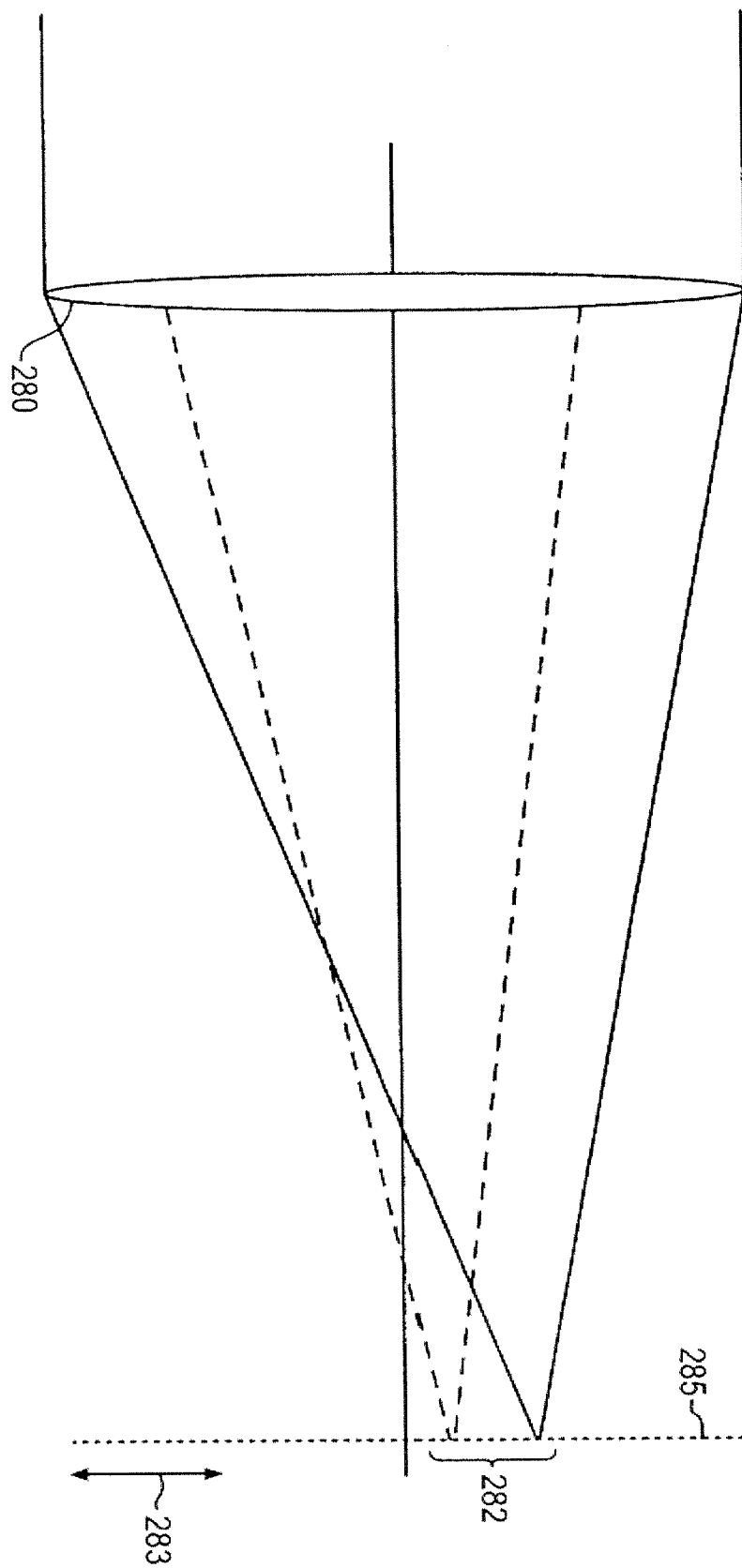


FIG. 16

FIG. 17

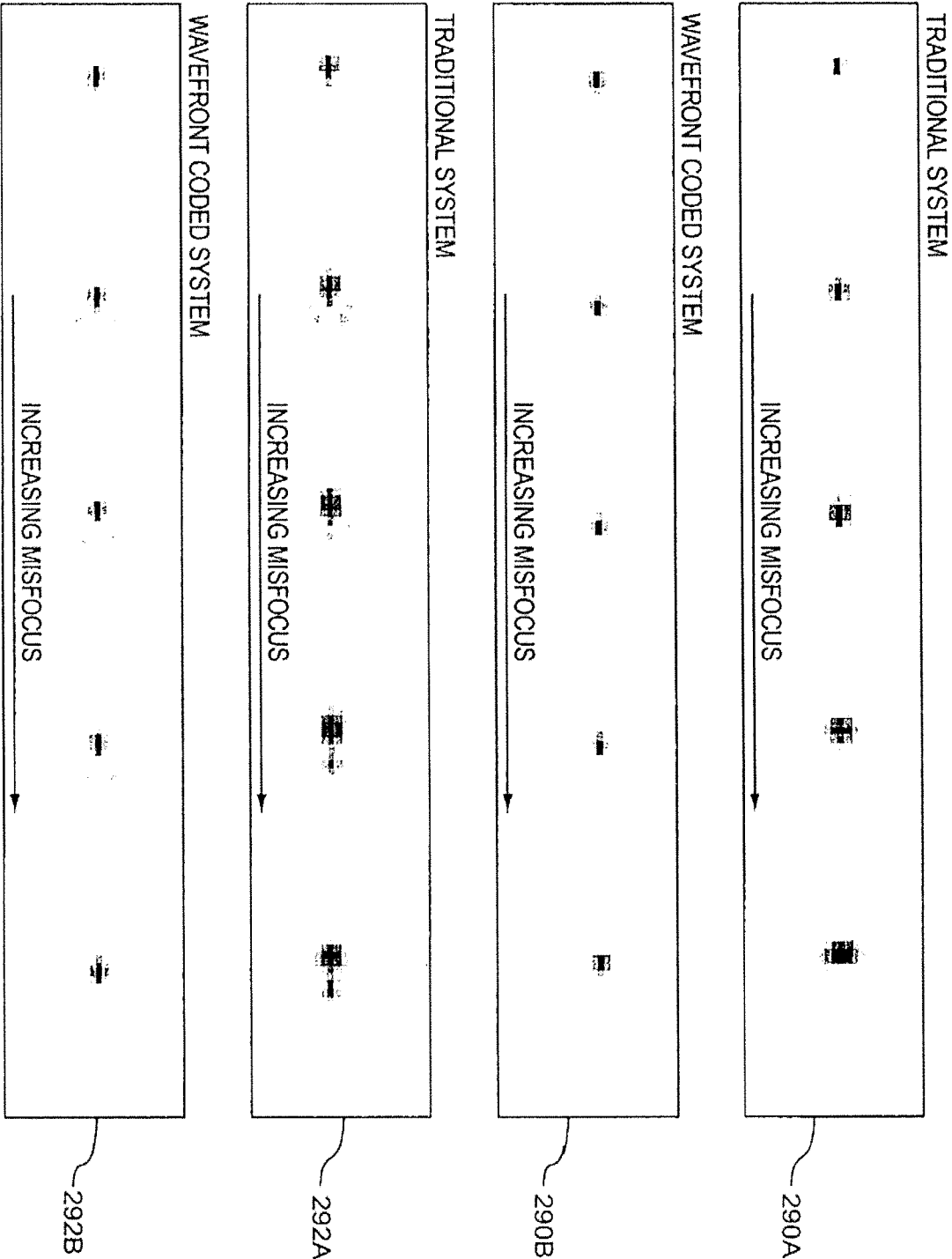
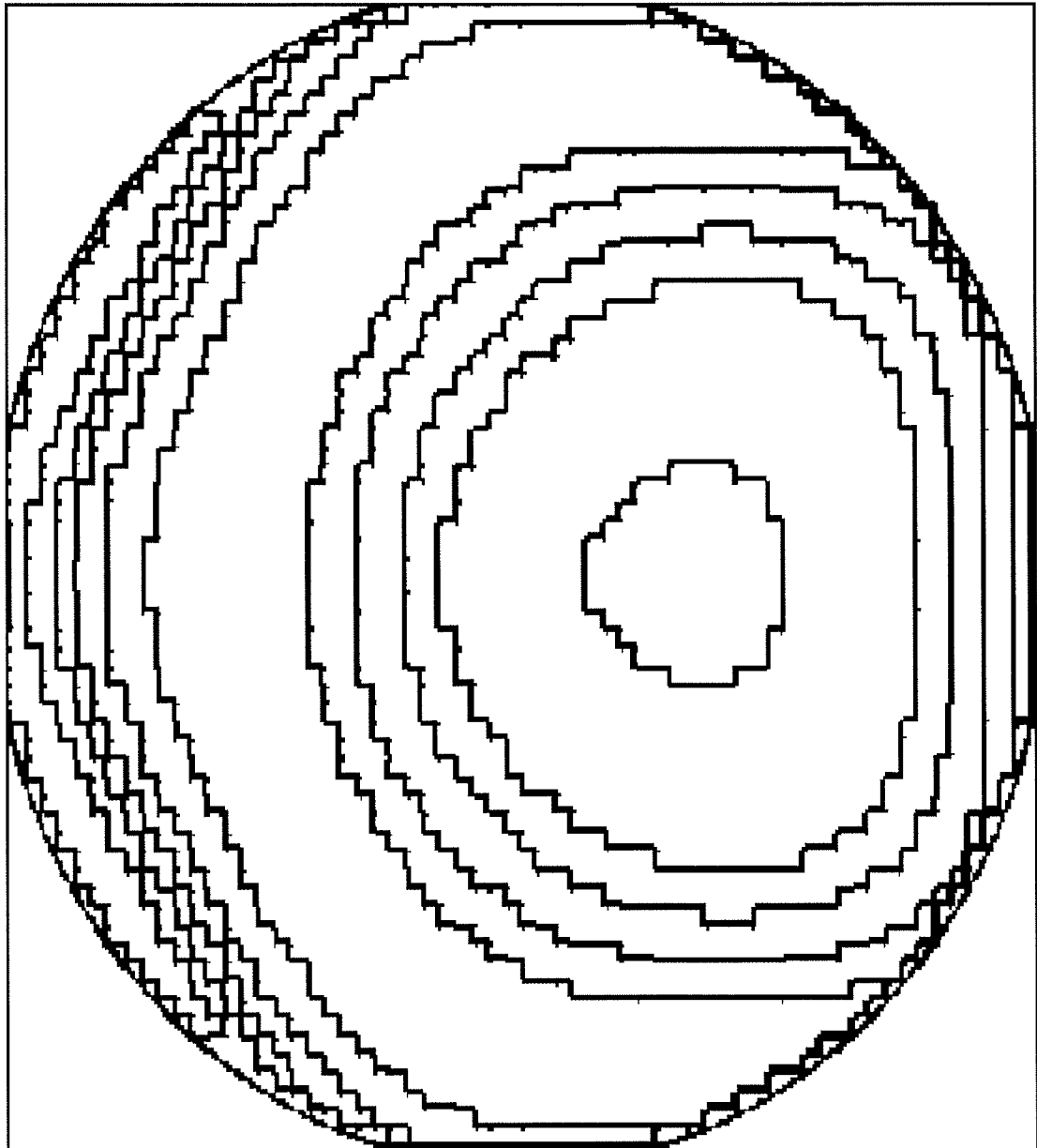


FIG. 17A

EXIT PUPIL OPD IN WAVES



Weights = [-0.1837 -0.3292 0.3110 -0.0210 -0.0628]

Functional Form = [R R³ R⁵ Rcos(θ) R³cos(3θ)]

FIG. 17B

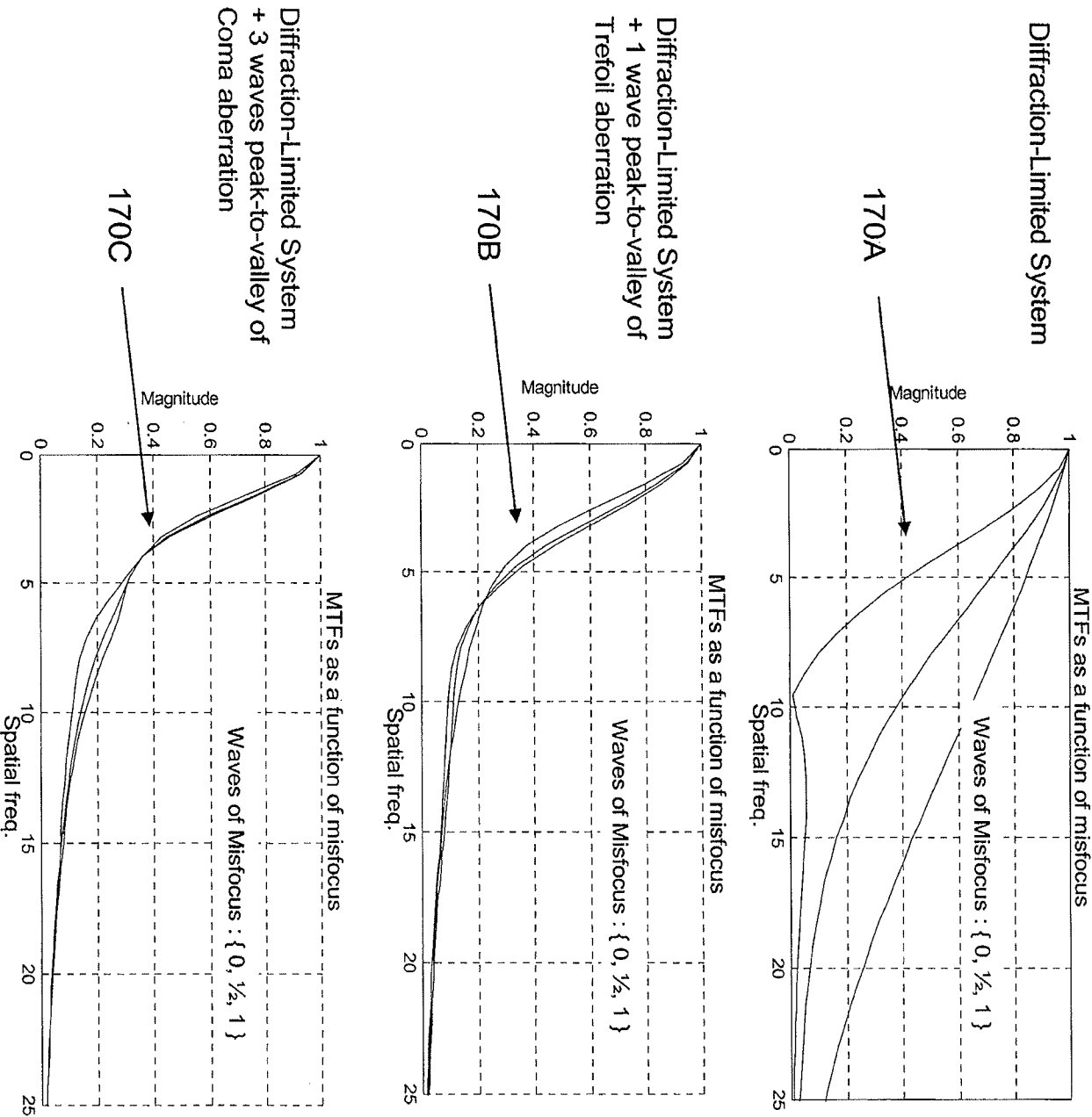


FIG. 17C

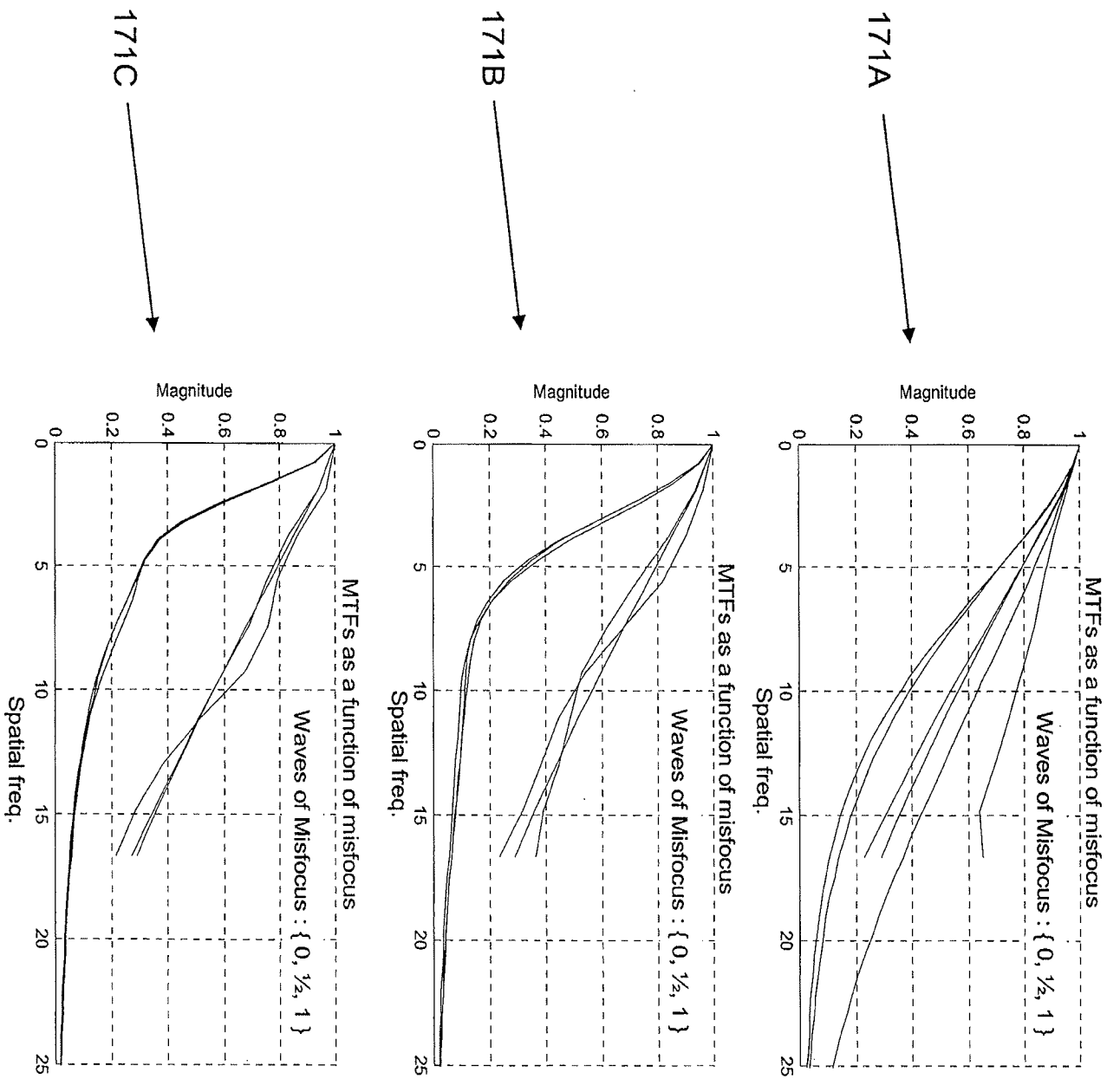
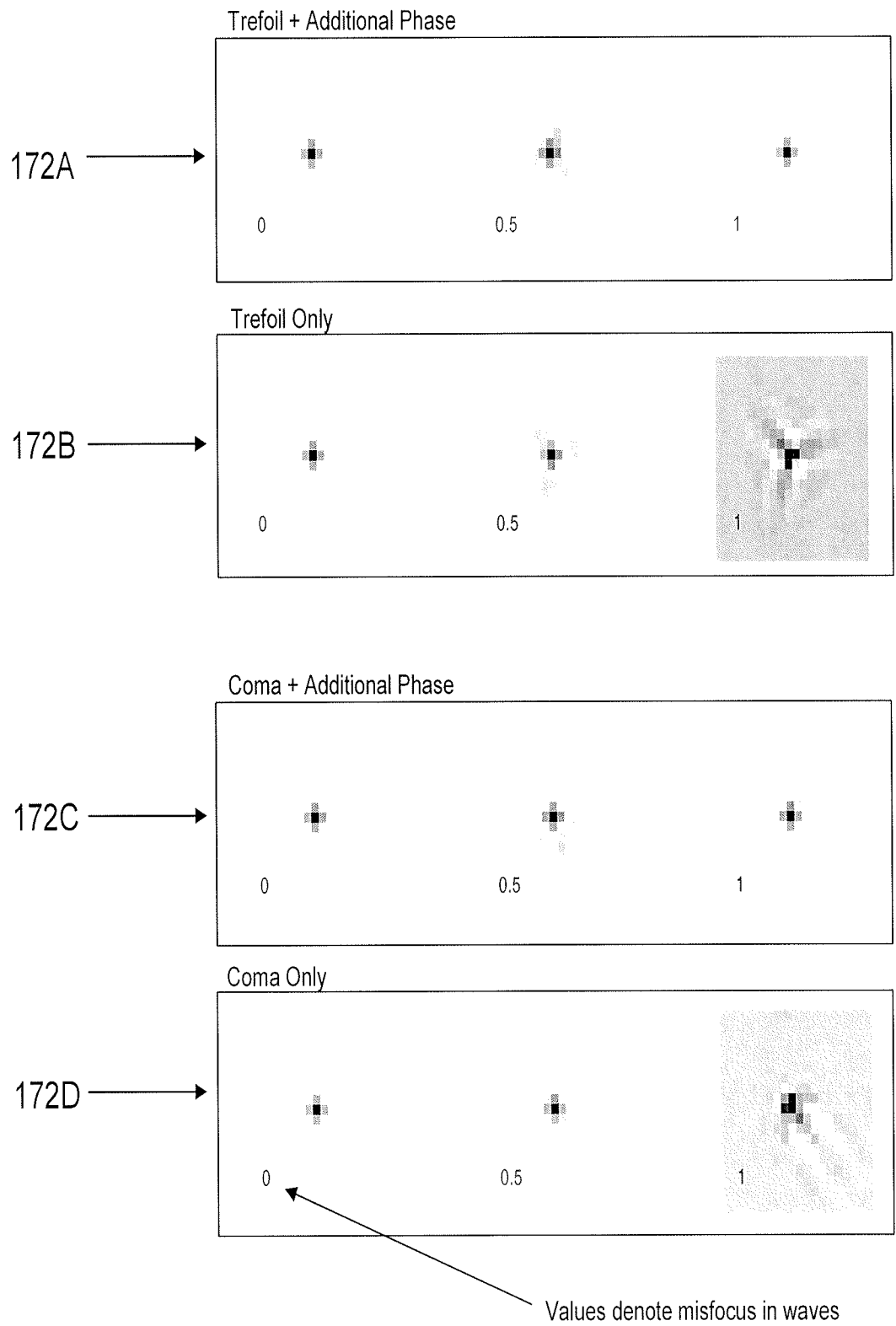


FIG. 17D



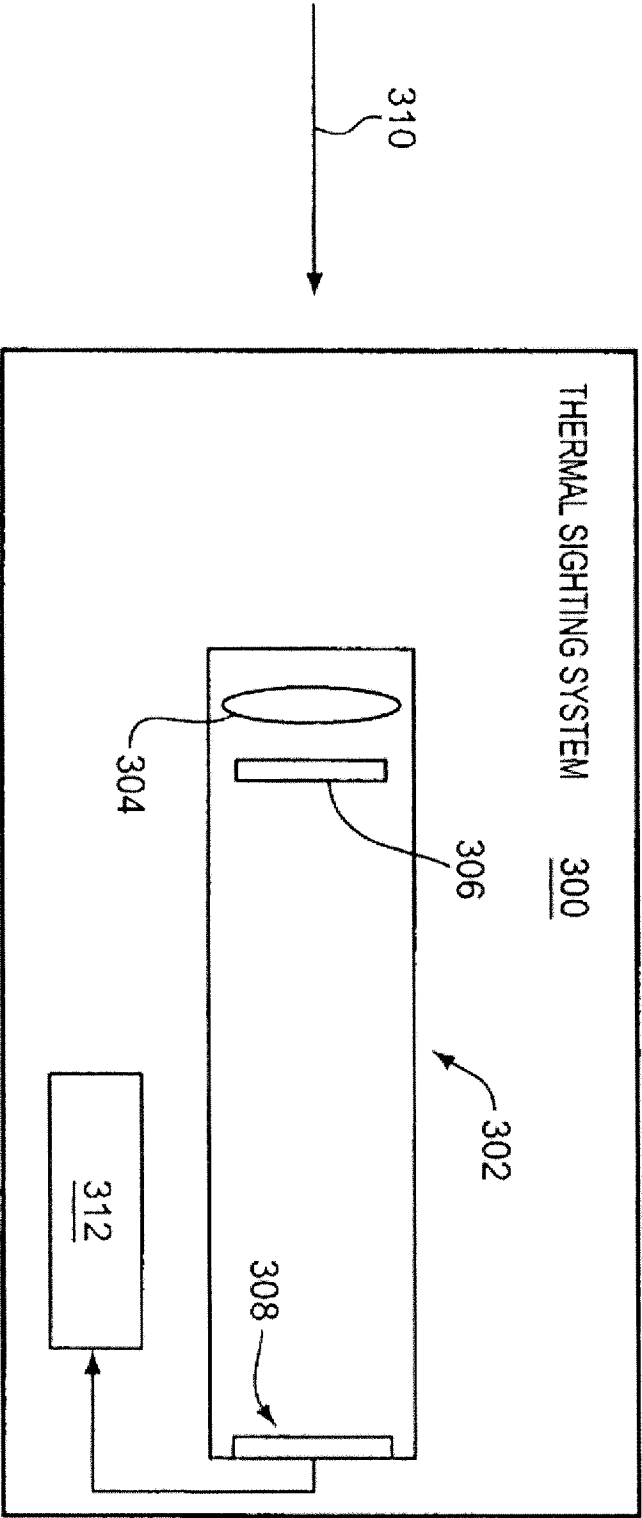


FIG. 18

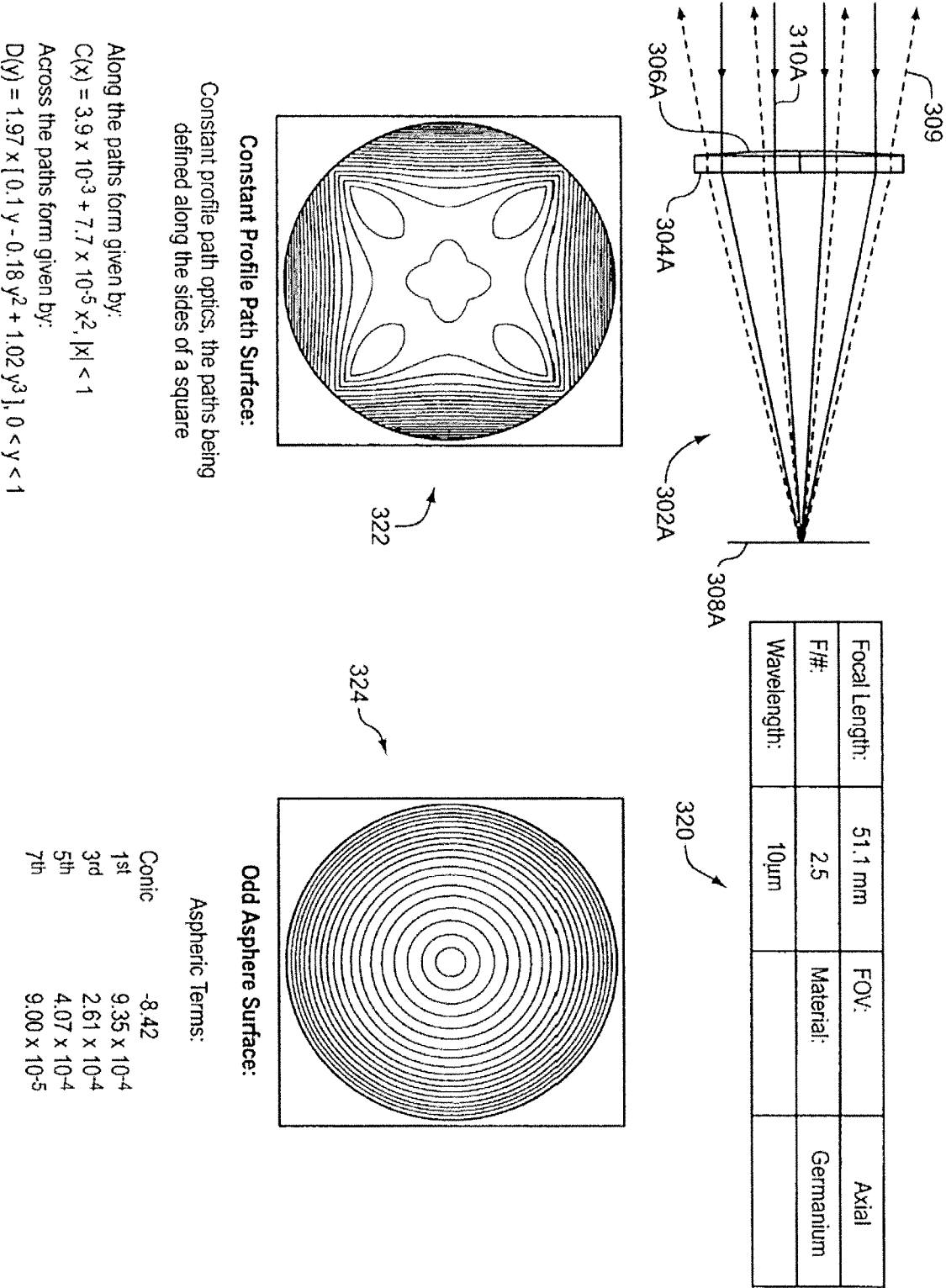


FIG. 19

FIG. 20A

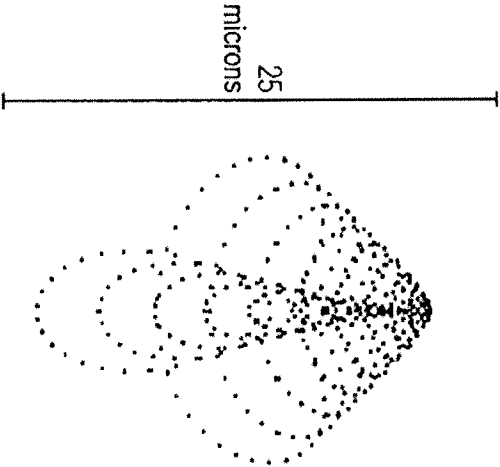
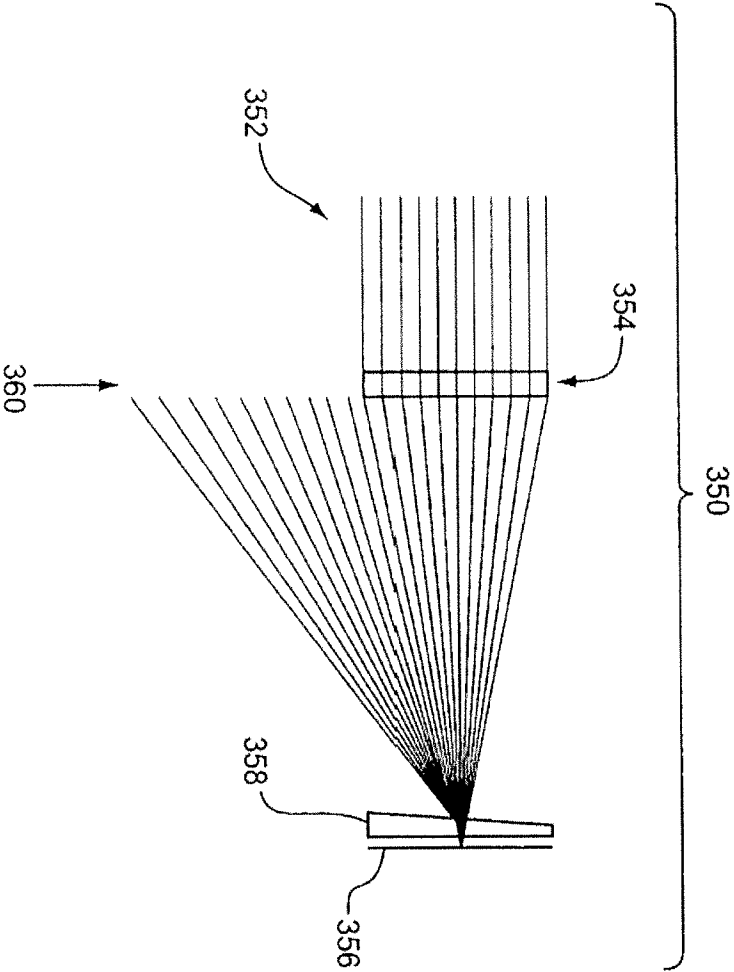


FIG. 20B

FIG. 21A

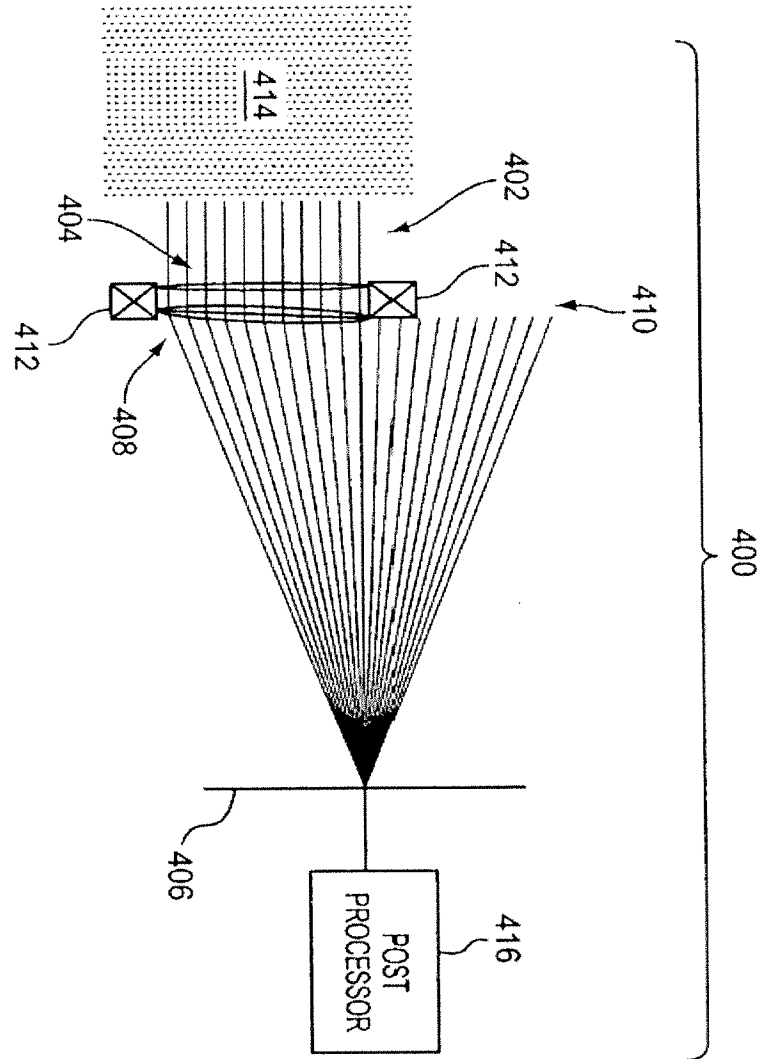
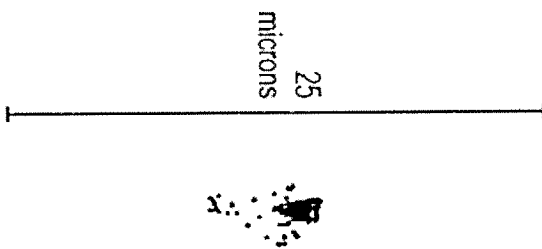


FIG. 21B



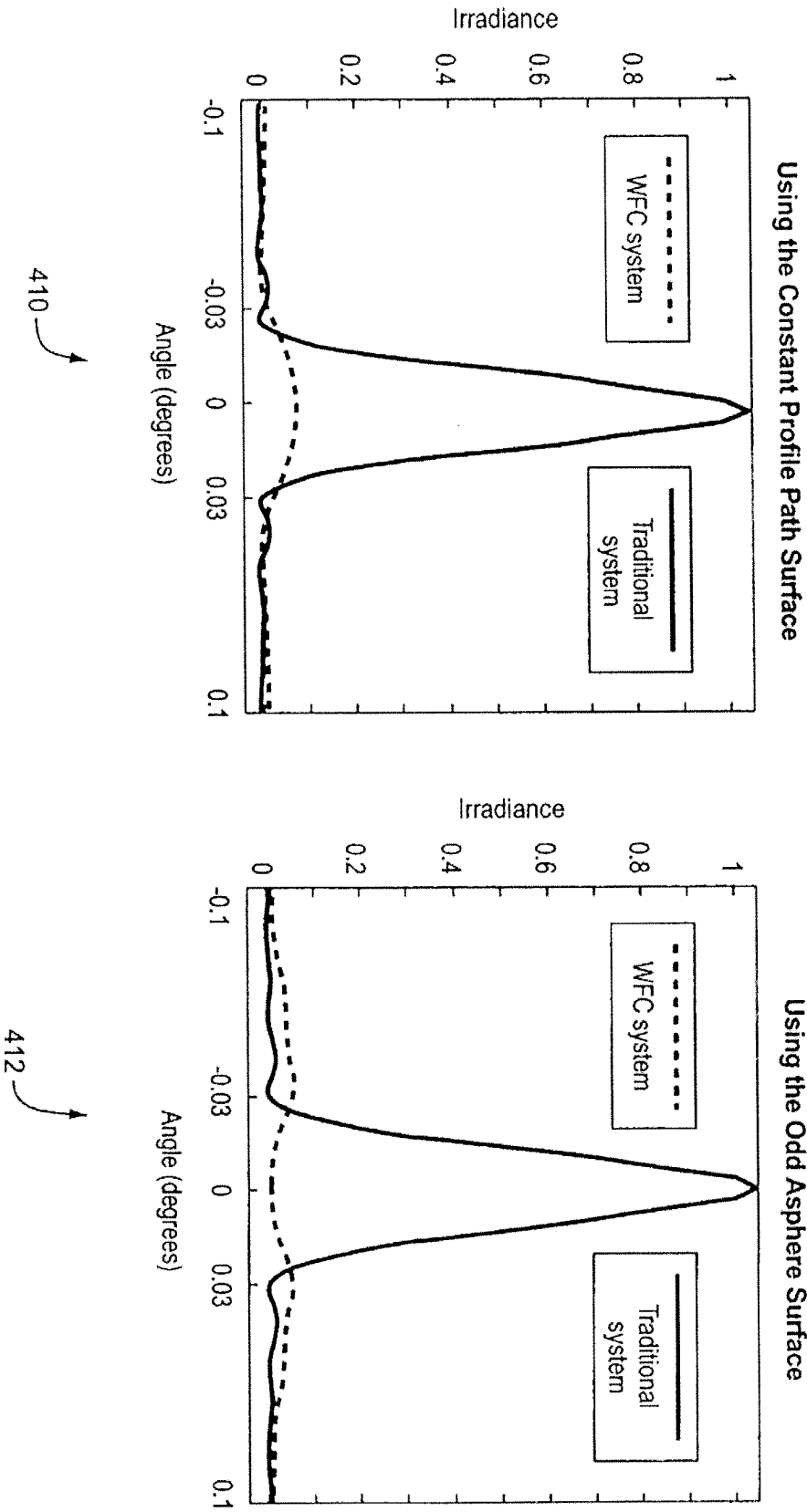


FIG. 22

FIG. 22A

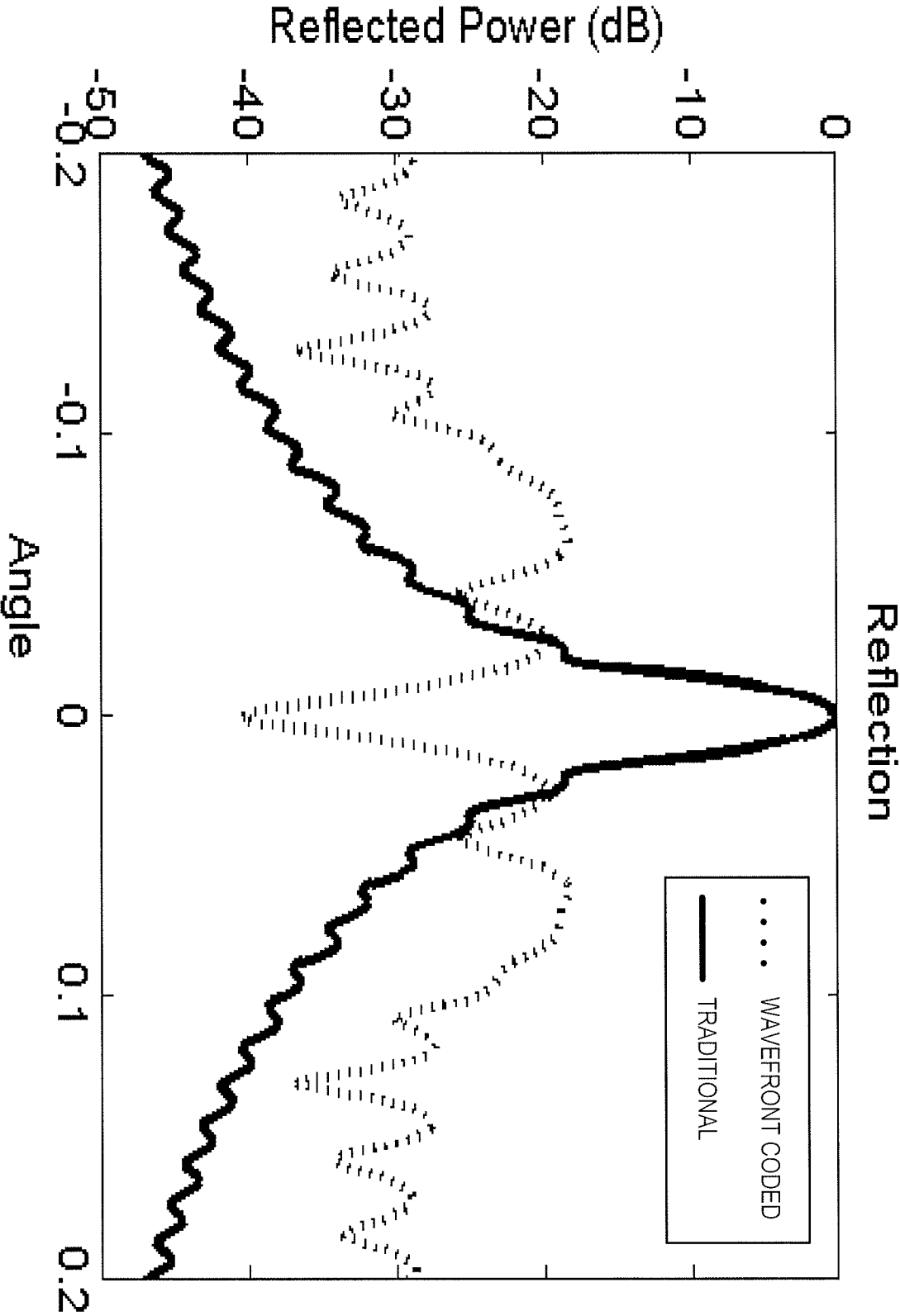


FIG. 22B

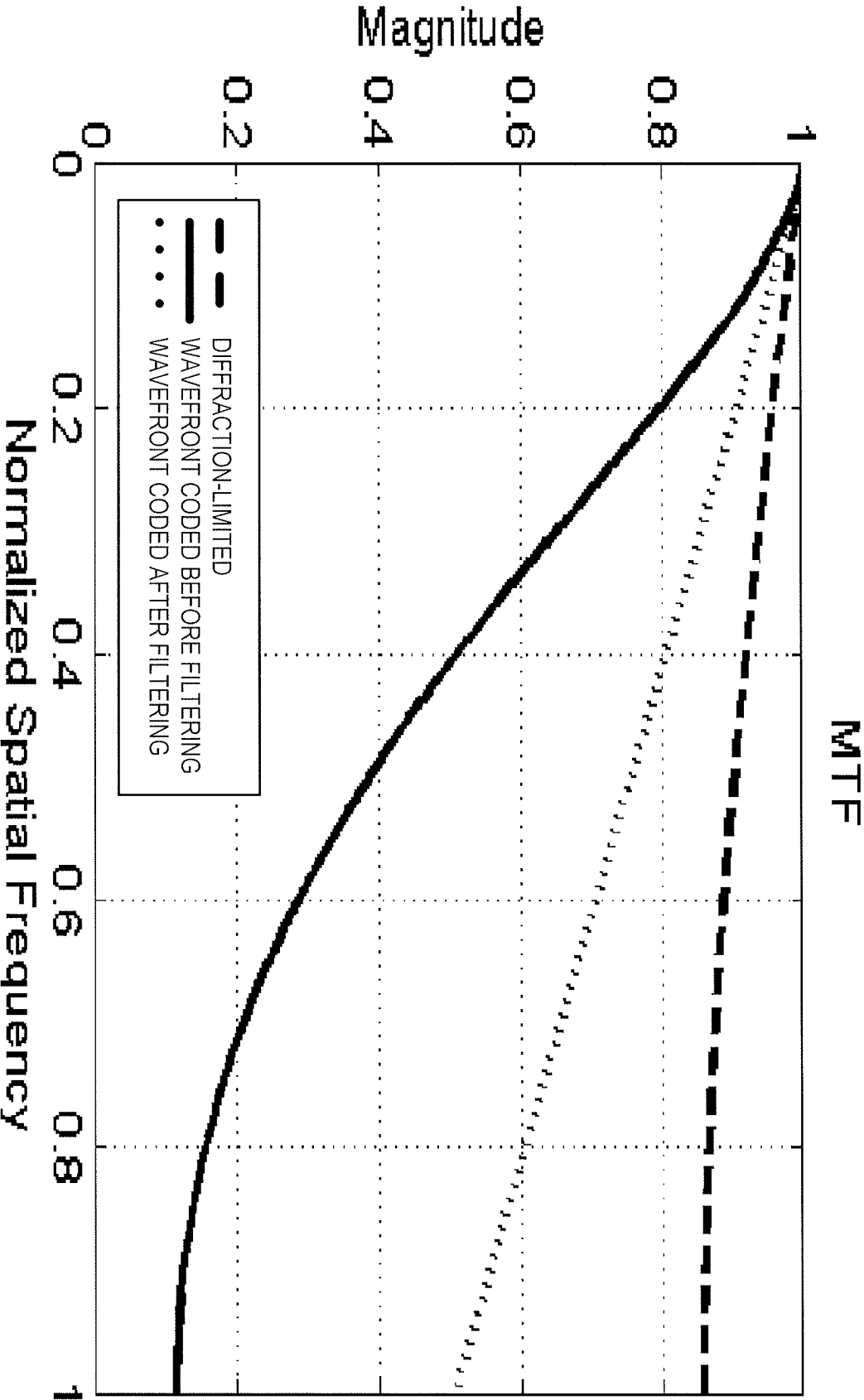


FIG. 22C

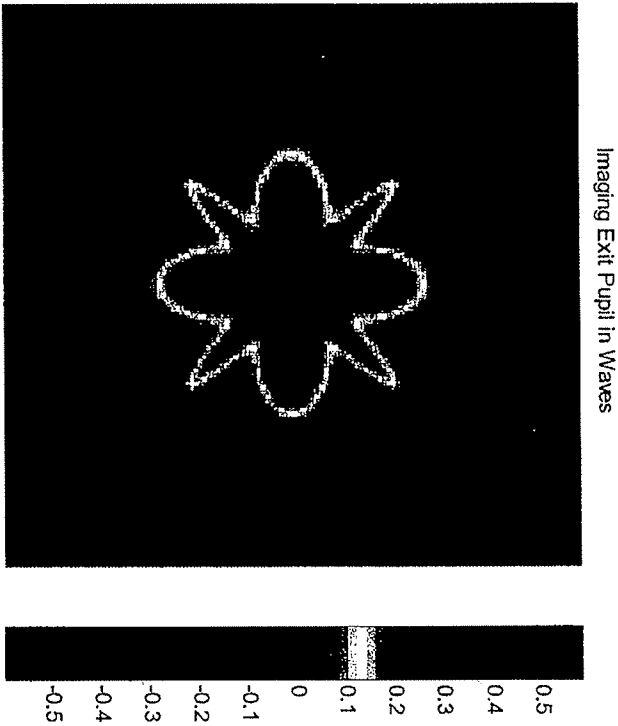
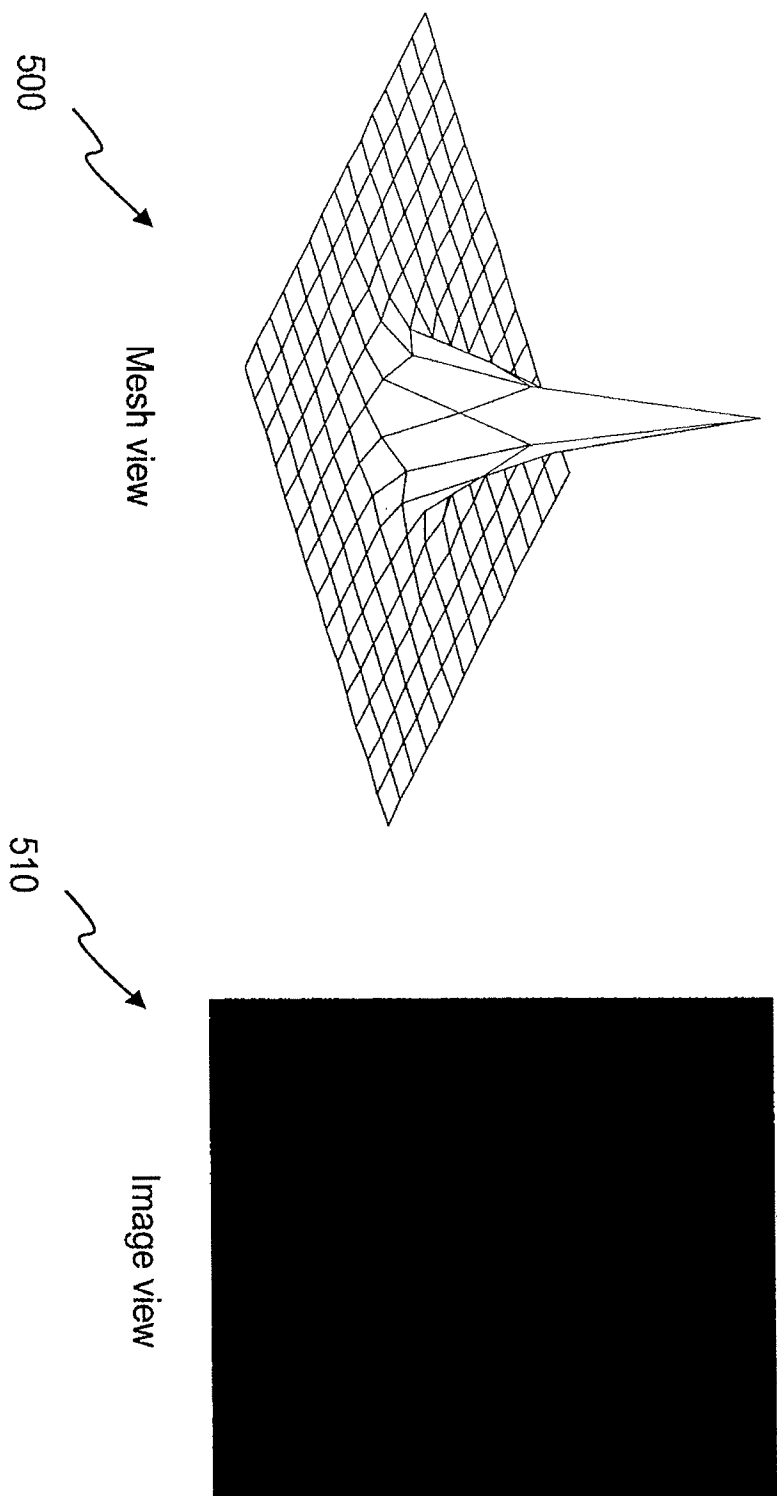


FIG. 22D



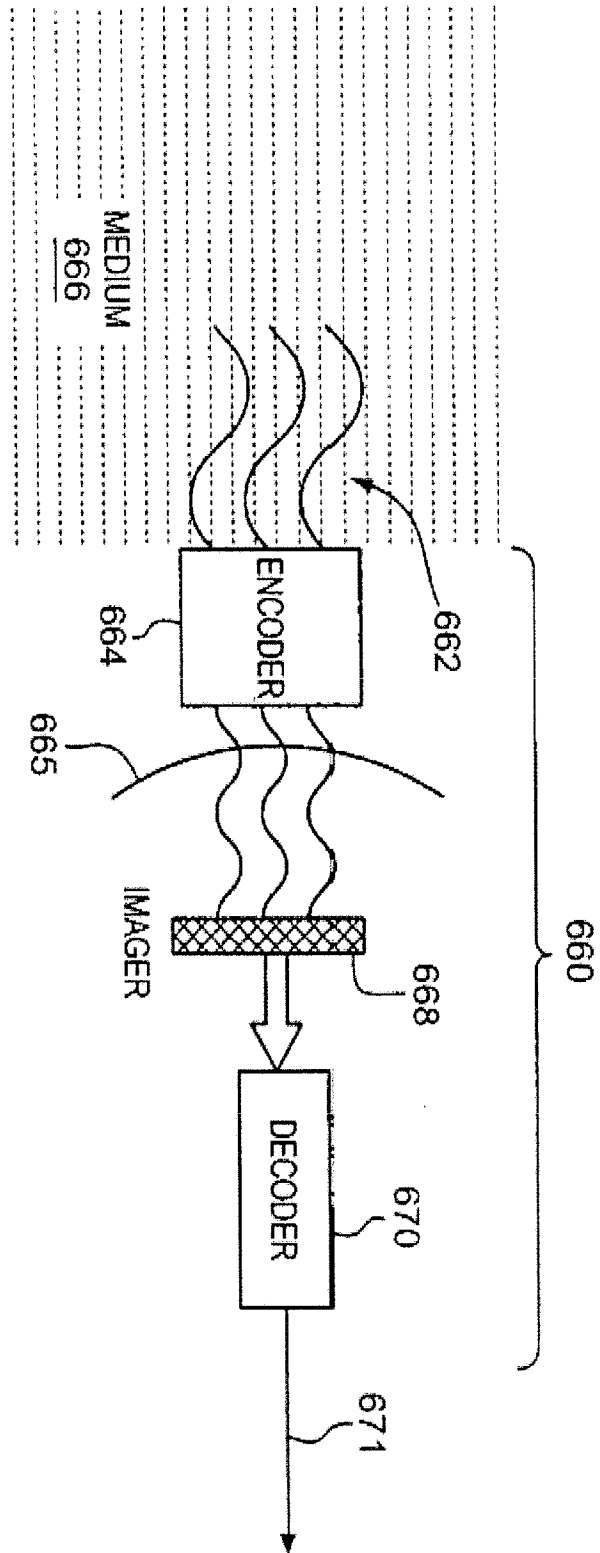


FIG. 23

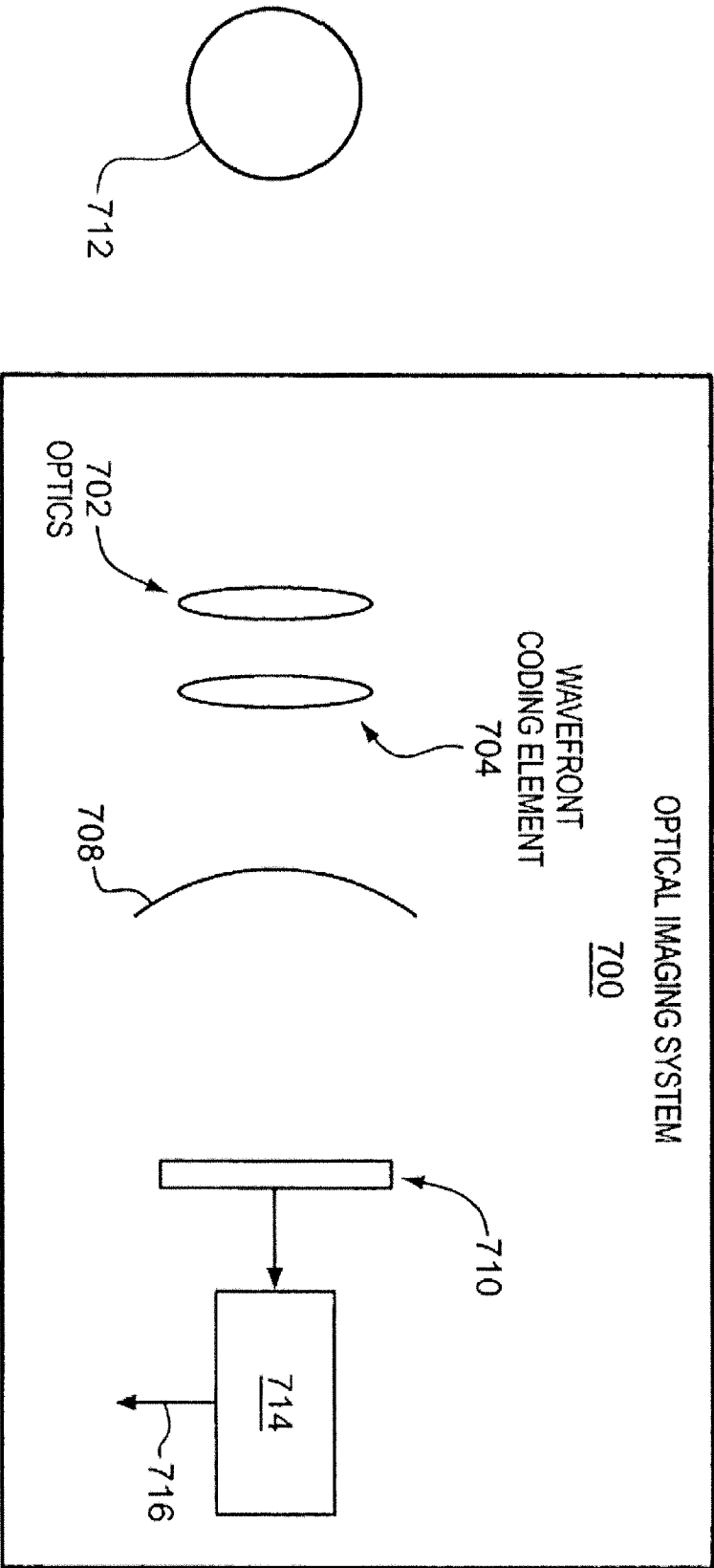


FIG. 24

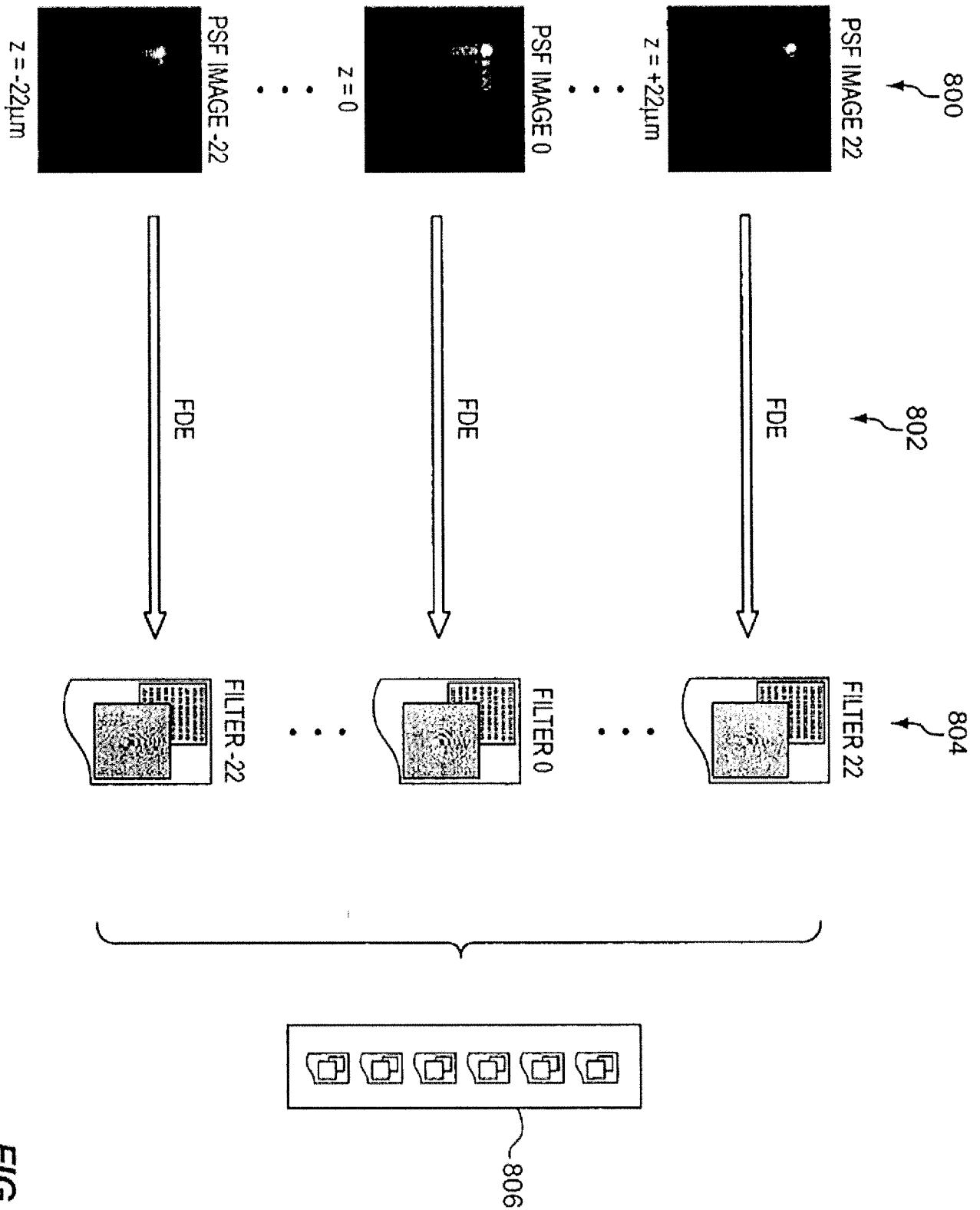


FIG. 25

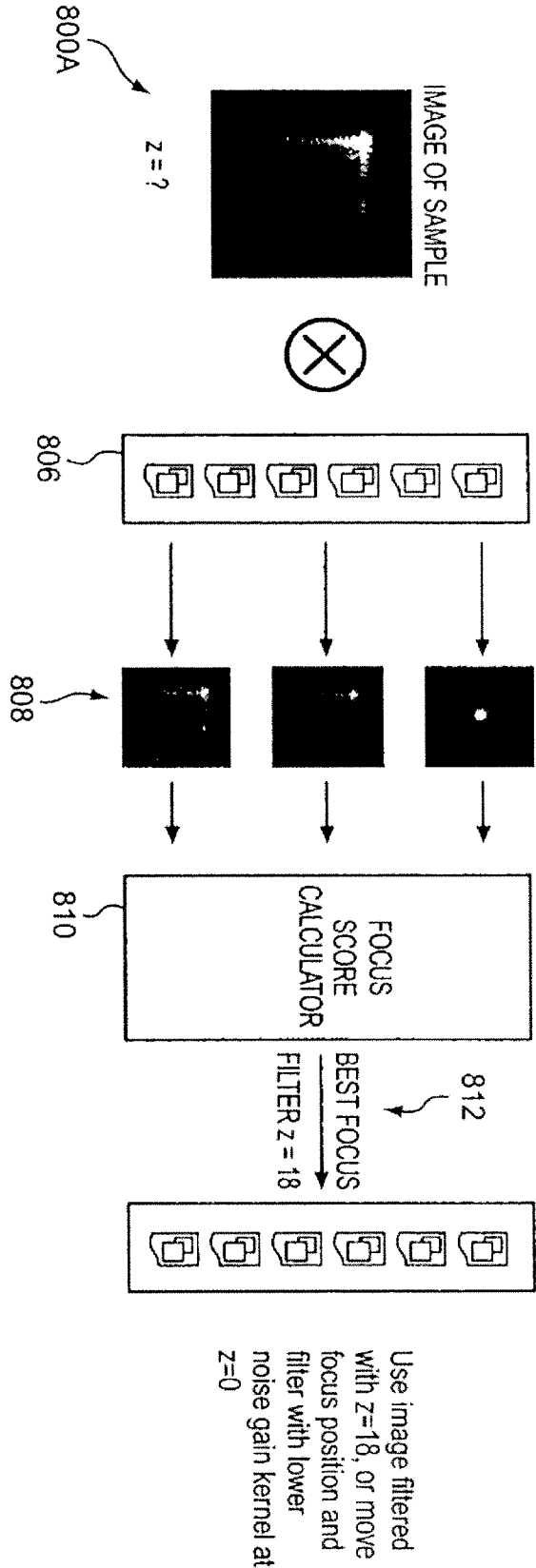
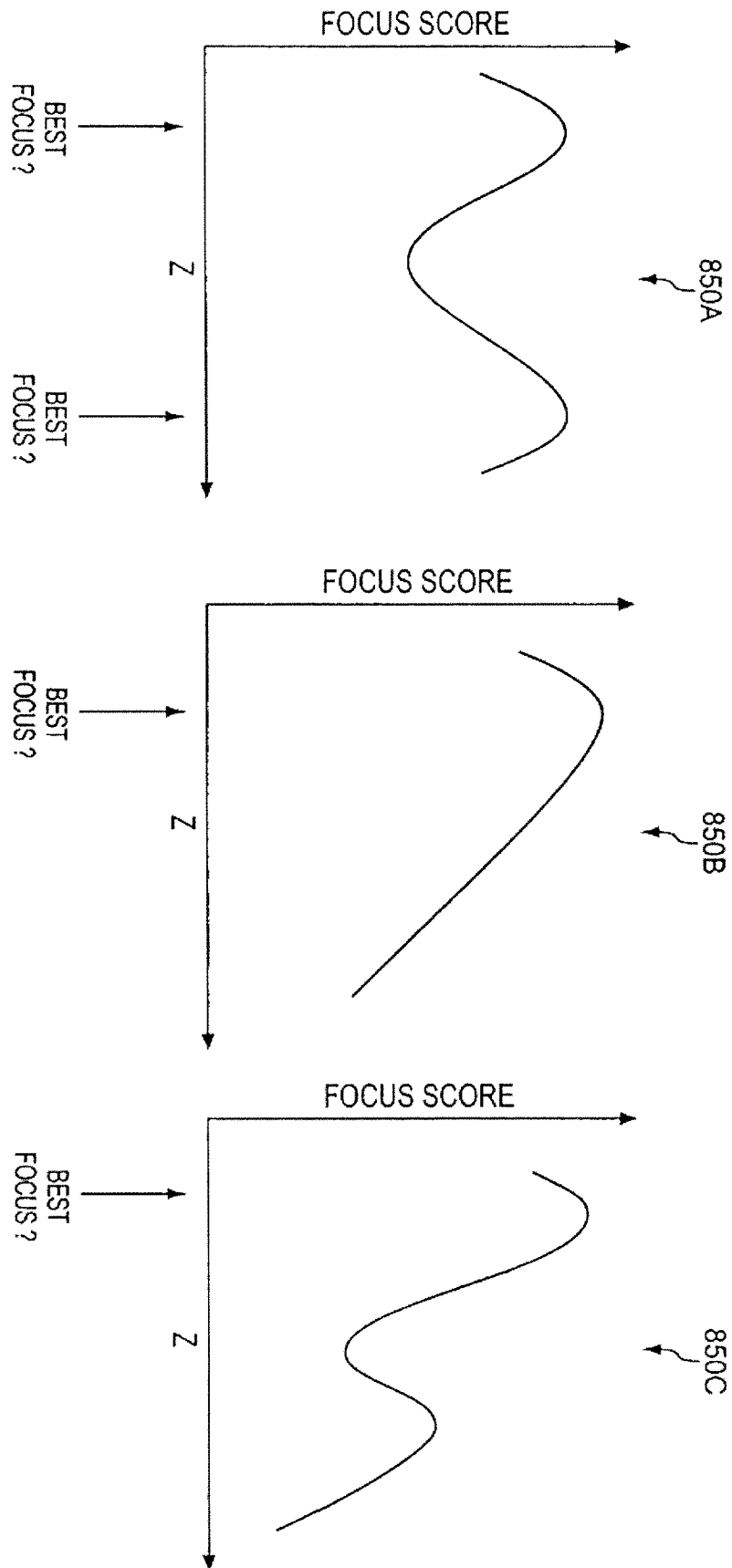


FIG. 26



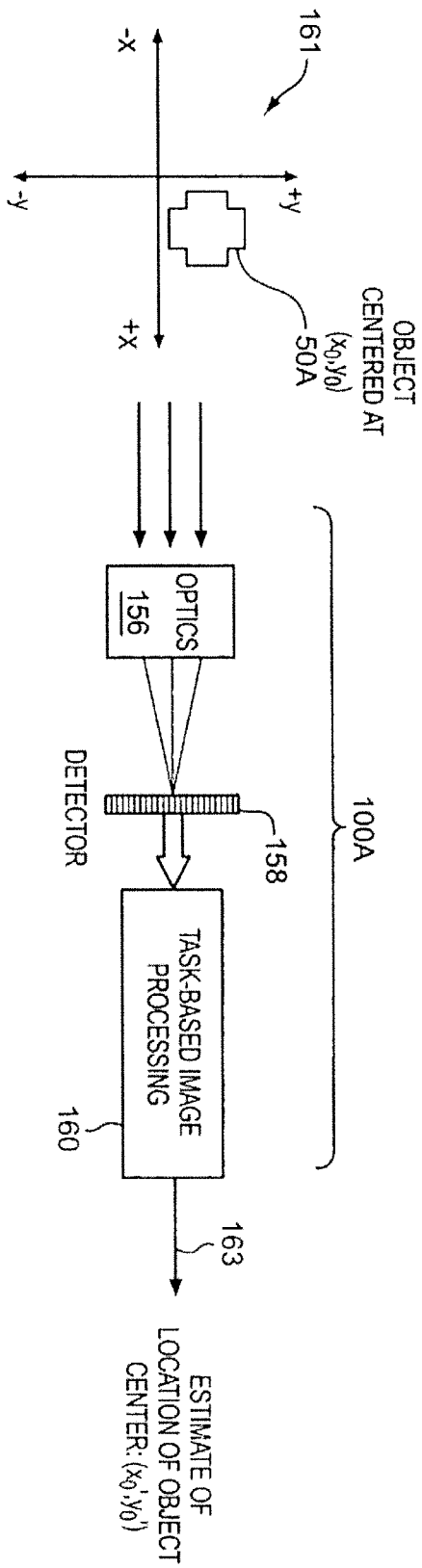


FIG. 28A

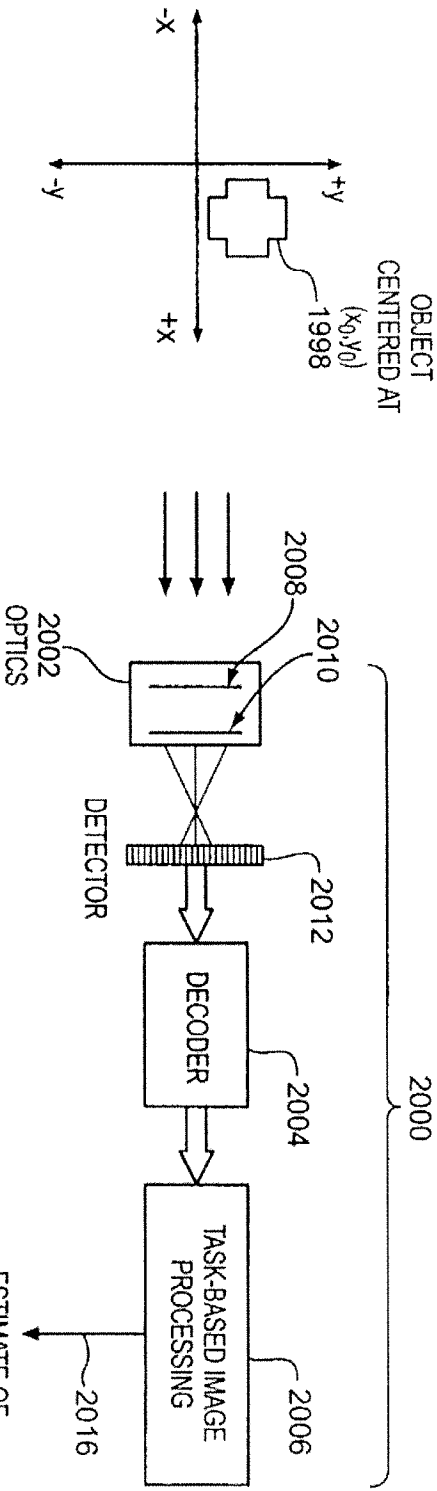


FIG. 28B

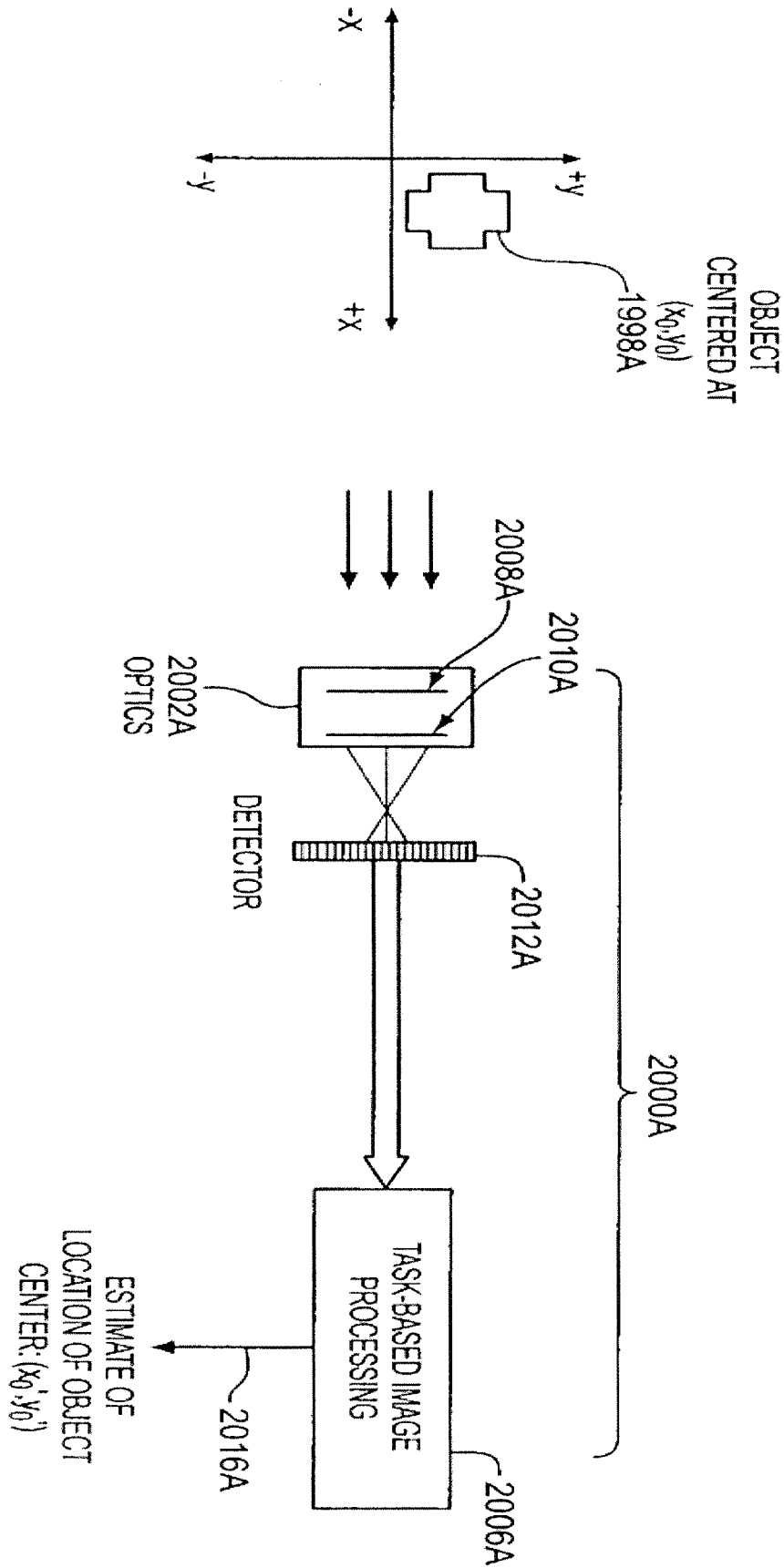


FIG. 28C

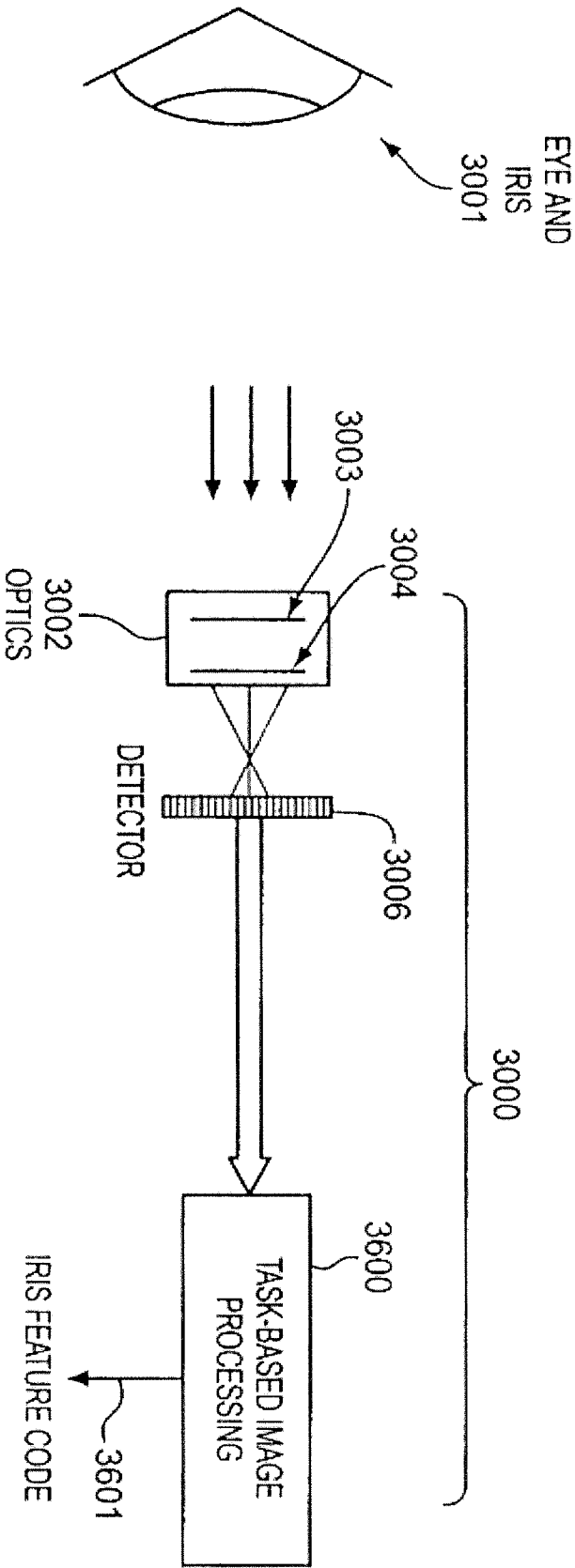


FIG. 29